

THE COMMERCIAL CAR JOURNAL

A Chilton Class Journal Publication
SEPTEMBER 1928



SAFETY for your goods . . . Safety for your equipment . . . Safety for your driver . . . This security is assured purchasers of any type of Graham Brothers Trucks. All are equipped with safe, internal expanding, self equalizing 4-wheel brakes.

Then there is safety of another sort—safety of your investment. Handsome returns in dollars earned, miles run, goods carried are being paid to the thousands and thousands of careful business men everywhere who have invested their transportation outlay in Graham Brothers Trucks.

GRAHAM BROTHERS TRUCKS

SOLD BY DODGE BROTHERS DEALERS EVERYWHERE



See Yellowstone Park

in a more comfortable way today and in
safety too — each bus is equipped with

GRAFILD BRAKE LINING



Send in this coupon for complete information

Name _____ Address _____
WORLD BESTOS CORPORATION, 52 Courtland Street, Paterson, N. J.



...in the chassis of the sturdy six cylinder Graham Brothers Trucks

KNOwn the world over for their *dependability* and *economy*, the famous Graham Brothers Trucks now offer the further performance advantages of *six cylinder engines, 4-wheel brakes and 4-speed transmissions.*

In the chassis of the 1½ Ton models is the latest type of noiseless "internal drive" 4-speed transmission. *And in this transmission are six Hyatt Quiet Roller Bearings!*

All other models in the Graham

Brothers truck line—from the smaller-capacity Merchants Express to the 2½ Ton Trucks—have Hyattized transmissions, the number of Hyatt bearings varying from 3 to 4.

In these facts is further evidence of the high regard in which Hyatt Roller Bearings are held by the foremost truck engineers in the country.

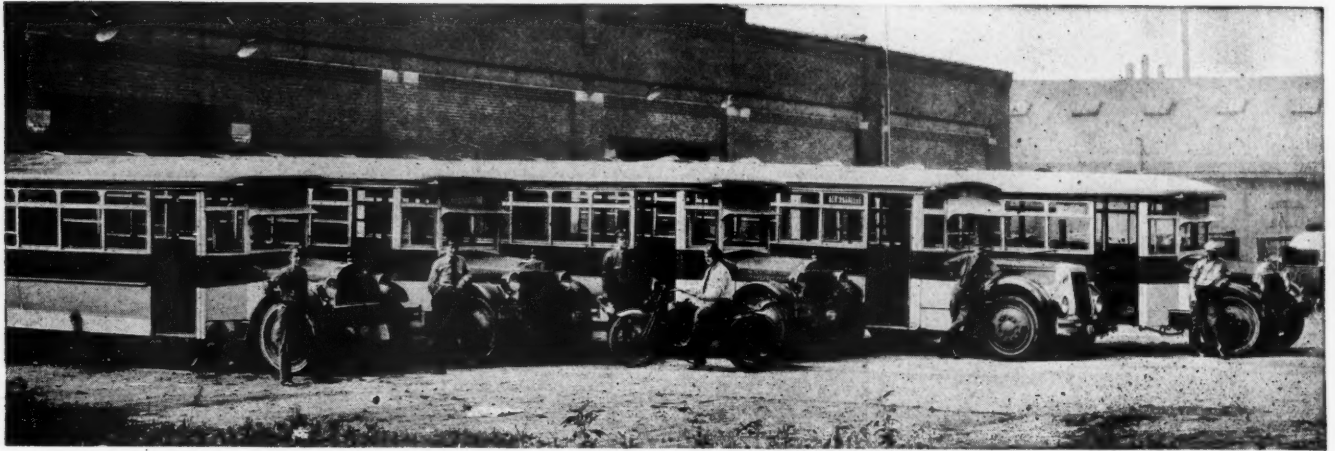
HYATT ROLLER BEARING COMPANY
Newark Detroit Chicago Pittsburgh Oakland



"Official Sign of
an authorized
Hyatt bearing
distributor."

HYATT

QUIET ROLLER BEARINGS



Some of the 50 buses operated by the County Transportation Co., a subsidiary of the New York, New Haven and Hartford Railroad

Catering to the most fastidious Bus Patron . . . THE COMMUTER

Why the County Transportation Company Standardizes on Denatured Alcohol

TO THOUSANDS of commuters in Westchester, reputed the world's richest section, the buses of the County Transportation Company are an essential link between home and the office.

A heavy responsibility is assumed by the bus line, for a few seconds delay in making train connections spells inconvenience and frequently financial losses to its large patronage of business men. In the depth of winter their inflexible schedules must be maintained.

Zero weather holds no terrors for their drivers—not even while waiting for the evening trains. The cooling systems of their engines are protected always by denatured alcohol.

Exhaustive tests by company en-

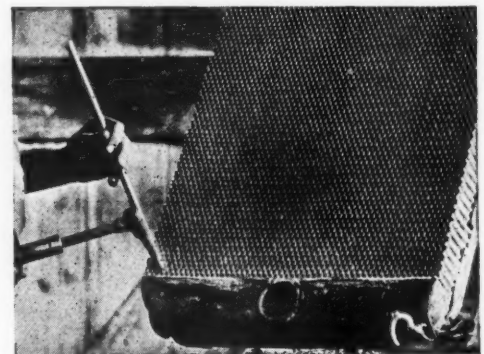
gineers have proven conclusively denatured alcohol is the only sure anti-freeze—the only protection that insures uninterrupted schedules.

Denatured alcohol is the cheapest, simplest, and most economical anti-freeze. Drivers have no fear of overheated engines losing power—no dread of gaskets or rubber hoses being eaten away—no possibility of scale forming to impair circulation. Denatured alcohol is no more harmful in your buses than water.

Most important of all—denatured alcohol reduces your maintenance costs. It is more economical whether it is used all winter or for

severe cold spells. It will cut your anti-freeze protection in half.

Call your local jobber now and arrange for delivery of denatured alcohol when the first real cold snap arrives. This early precaution may save you thousands of dollars in maintenance costs. The Industrial Alcohol Institute, Inc., 30 East 42nd St., New York, N. Y.



The cost of a single radiator repair may easily exceed the cost of a year's supply of denatured alcohol

THE INDUSTRIAL

ALCOHOL INSTITUTE, Inc.

THE COMMERCIAL CAR JOURNAL

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TABLE OF CONTENTS

LEADING ARTICLES

Truck Sales Maintain Rapid Pace.....	9
Central Sales and Service Feature Reo's New Home..	10
Directed Selling Effort Gives Sales Leadership.....	12
Program for Mid-West Congress.....	14
How Fast Does the Engine Run?.....	15
To Zone or Not to Zone.....	16
How to Service Timken Front End Bearings.....	18

DEPARTMENTS

The Editor's Notebook	11
Shop Ideas	20
Flat Rate Price List.....	21
New Truck and Bus Models.....	22
New Parts and Shop Equipment.....	26
News	27
Coming Events	30
Commercial Car Specifications.....	37
Motor Bus Specifications.....	48
Advertisers' Index	100

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... "because
it is
the finest"

That is the reason advanced by a leading truck and bus manufacturer who has standardized on Zenith Carburetion from the time the company started.

That is also the reason why the majority of commercial car manufacturers now standardize on Zenith.

*Zenith Heavy-Duty Fuel
Filters provide efficient
fuel filtration for trucks
and buses*

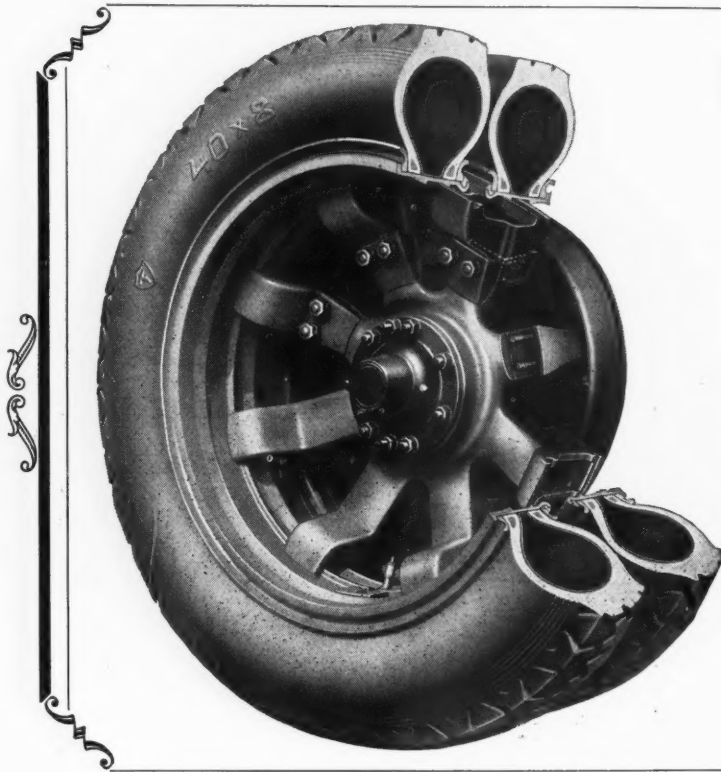
ZENITH-DETROIT CORPORATION

Manufacturers of
Zenith Carburetors and Fuel Filters
DETROIT, MICHIGAN

Over 1200 Service Stations

Member Motor Truck Industries, Inc., of America

HOOPES WHEELS



For Single and Dual Pneumatic Tires

Hoopes-Parker Wheels—A Spider type of wheel with hub cast integral for use on trucks and buses.

Both brakes and tires of the dual wheels are cooled owing to the free circulation of air fanned by specially constructed spokes.

Tires run perfectly true and rims carrying both inside and outside tires can be easily and quickly mounted or removed from the wheel.

The wheels are light in weight—The cost is surprisingly low.

For Single and Dual Solid Tires

Hoopes Wood Spoke Metal Felloe Wheels—Unusually light in weight, yet tremendously strong—due to special Metal Felloe construction.

They will greatly reduce unsprung chassis weight, which means more pay load at less operating expense.

Trucks with *solid tires* need the resiliency of wood spoke wheels to absorb road shocks and protect the mechanism from excessive vibration.

Strong—light weight—shock absorbing wheels—at no additional cost.



1867

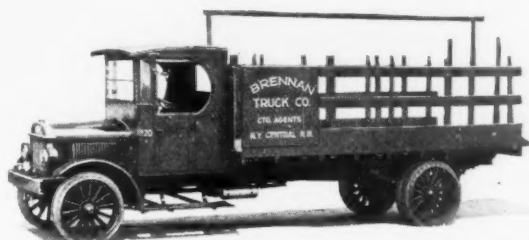
Hoopes, Bro. & Darlington, Inc.
WEST CHESTER, PA.

1928



DETROIT

*In the Center of
the Automotive Industry
is an
Autocar City!*



One of the best Autocar distributing points is the city of Detroit—the heart of the Automotive Industry!

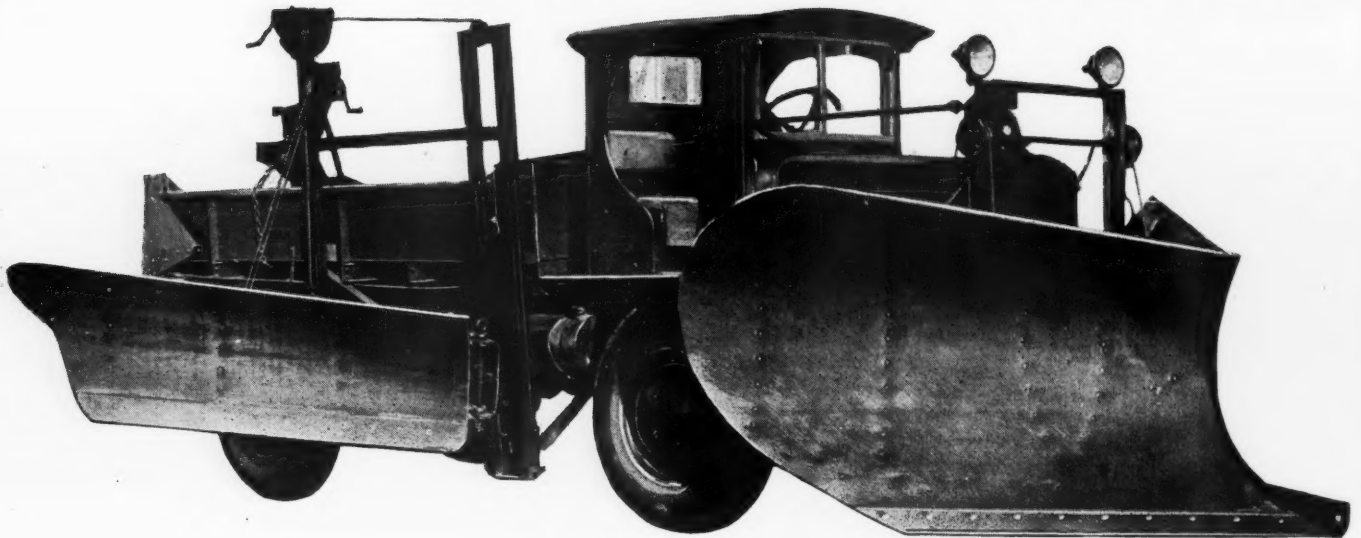
Autocars lead in the fleets of Detroit's leading truckmen—those whose profits depend on their truck-buying judgment. Thirteen of the most progressive Detroit fleets operate a total of 87 Autocars. (Send for illustrated list.)

Autocar Trucks are sturdy, reliable, economical, powerful, speedy, good-looking travellers of the open road. Watch the increasing number of prominent Detroit Autocar owners, and you will know that each of our claims for Autocars is backed conclusively with *proof!*

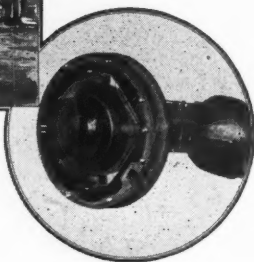
At many other points there is the same or an even better opportunity. Write for the Autocar Dealer Plan and let us point out the possibilities that exist in your territory.

== Autocar Trucks ==

The Autocar Company, Ardmore, Pa., Established 1897



SNOW REMOVAL— and the FOUR WHEEL DRIVE



Did you ever try to help the team, when the old farm wagon was stuck in the mud? You grabbed the spokes out at the rim of the wheel—not near the hub! This same, simple principle is the secret of Coleman performance. The power is applied to the front wheel out at the felloeband. That's why Coleman Trucks can use 150 to 1 gear ratio in low and still *steer like a touring car!* It's all in the front wheel!

The Coleman 4 Wheel Drive Truck can be easily steered through the deepest drifts and has twice the tractive power to force the plow through the snow. You must have *power in the front wheels* to steer a plow!

Speed in getting from one drift to the next makes the Coleman a more efficient snow fighting machine. A Coleman equals a tractor in draw bar pull—and between drifts runs at thirty miles an hour! The Coleman Truck will clear miles of highway in a minimum of time.

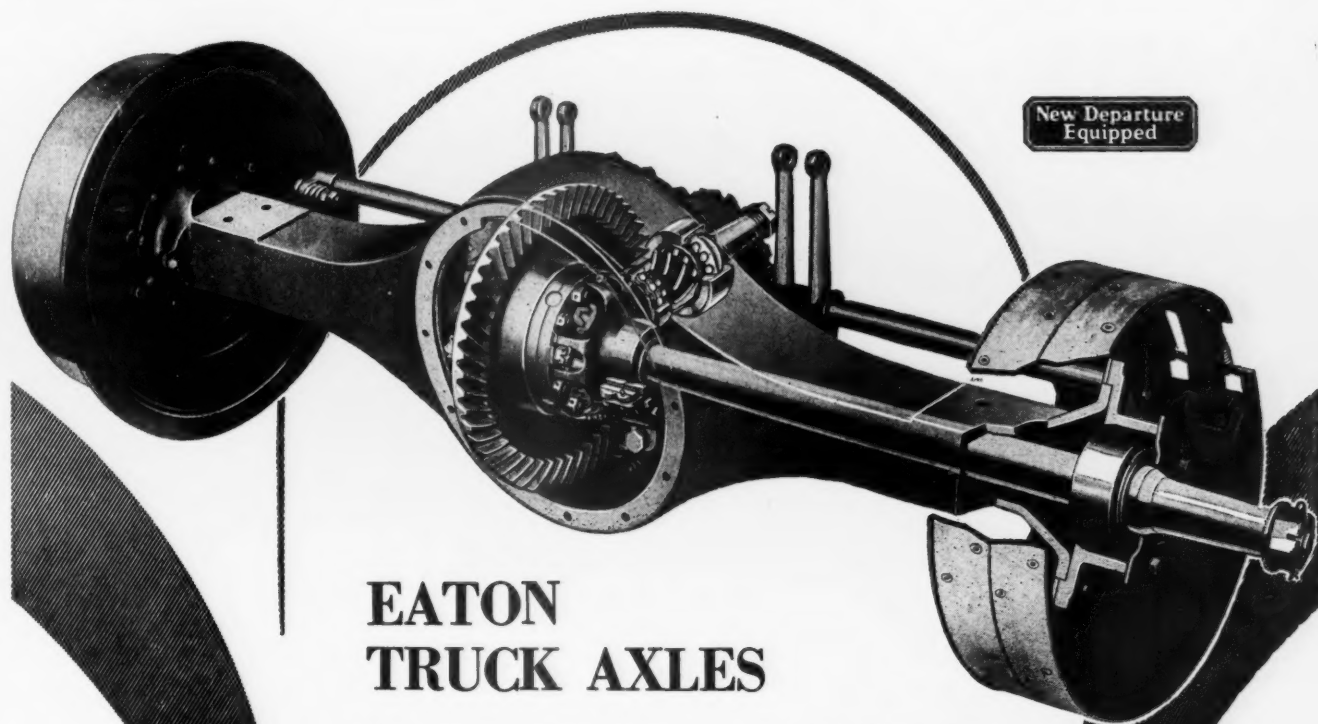
After the snow removal season is over the Coleman can be used for highway repair and maintenance work—hauling road materials—pulling graders and maintainers.

This is a big market for Truck Sales—and the Coleman Dealer is sure to get a large share of it! Write for details of the Coleman Franchise in your territory.

COLEMAN MOTORS CORPORATION
Main Plant Eastern Plant
Littleton, Colorado Washington, D. C.

COLEMAN

FOUR WHEEL DRIVE



EATON TRUCK AXLES

have pinion rigidity

built-in permanently by the correct use of
New Departure Ball Bearings.

Operators and service departments appreciate the fact that this Eaton pinion maintains its proper position. The result is the elimination of undue wear and of time out for readjustments.

This advantage is obtained because New Departure Ball Bearings are made to such precise dimensions and of such enduring electric furnace high carbon steels that bearing wear is not perceptible.

This set rigidity is earning for New Departures ever-increasing preference.

THE NEW DEPARTURE MFG. COMPANY
BRISTOL, CONNECTICUT
Chicago San Francisco Detroit



New Departure Quality Ball Bearings



On Lake Pontchartrain is this new bridge, the longest all-concrete structure in the world. The New Orleans Pontchartrain Bridge Company owns and uses fast and sturdy International Speed Trucks on maintenance work. Each truck hauls wet shell rock on a big daily mileage.



Building a mountain road at 12,000-foot elevation, near Silver Plume, Colorado. These trucks, owned by Luke E. Smith, contractor, are International "SIX-SPEED SPECIALS."

International Trucks and McCormick-Deering Tractors

GENERAL CONTRACTORS; builders and maintainers of highways and bridges; municipalities, utilities, and public authorities—such as these know you can handle a lot of stuff in short order and at low cost with International Harvester Equipment. Heavy work is being done with International trucks and McCormick-Deering industrial tractors the country over. They are built to stand the gaff and they are mighty nimble and flexible in the bargain. Performance and reputation are putting them on the job in ever-increasing numbers.

The franchise for the International line of trucks, which are fitted for every type of hauling and backed by a 24-year reputation, offers the dealer one of the finest opportunities in the automotive field. Sizes, $\frac{3}{4}$ -ton to 5-ton; 4 and 6-cylinder models; service through 164 Company-owned branches. Write us for information.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. OF AMERICA
(Incorporated)

Chicago, Illinois



Above: 35 feet below ground level at Pensauken, New Jersey. These International heavy-duty dump trucks are hauling gravel to Crescent Boulevard, adjacent to the new Delaware River bridge. The trucks are owned by the Ace Motor Transport, Collingswood, N. J.



Above: Model 30 McCormick-Deering industrial tractor on Alwatrac crawler, hauling a 7-yard 10-ton contractor's wagon—obviously a powerful and capable combination.

Below: Here's a great saver of labor in the winter time. The McCormick-Deering tractor rapidly clears the snow from street and road, private plant and yard. This one used at Duluth, Minn.



Below: Rerouting county highways in southern Wisconsin. Trackson crawlers and Rome grader, a good team with McCormick-Deering tractor power.



The Commercial Car Journal

VOLUME XXXVI

PHILADELPHIA, SEPTEMBER 15, 1928

NUMBER 1

Truck Sales Maintain Rapid Pace

Makers Other Than Ford Are Running 20 Per Cent Ahead of Last Year

AS the truck industry swings into the closing months of 1928, indications multiply that the confidence with which the trade and factories viewed the outlook at the beginning of the year was entirely warranted. At that time, COMMERCIAL CAR JOURNAL made a comprehensive survey which indicated that the industry generally was of the opinion that 1928 would be a good truck year. Records available at the present time indicate that 1928 has been a good sales year so far and there are strong evidences that the steady improvement in business will continue into 1929.

Among the factors supporting this favorable view of the current situation are the following:

Production for the first eight months of the year is almost equal to last year despite curtailed Ford operations.

Although domestic sales are behind last year, makers other than Ford have sold about 20 per cent more than last year.

Sales of trucks rated at 2 tons and over are running substantially ahead of last year which is a development of particular interest because of the somewhat slow demand which has prevailed in this section of the market for some

By Donald Blanchard

time. Trucks under 2 tons are slightly off due, of course, to Ford.

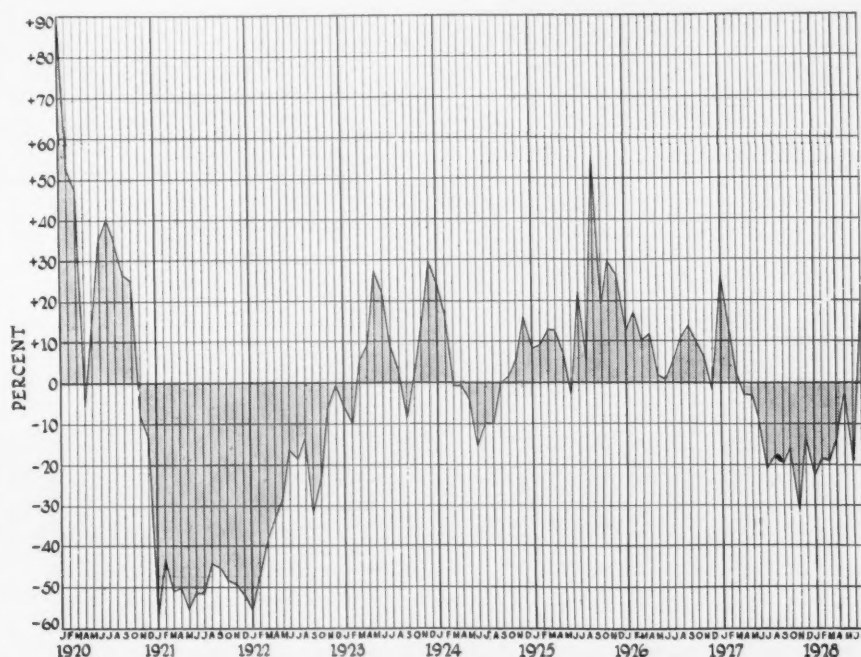
Export sales are reaching

new high levels despite the record volume of business done abroad last year.

Truck production in July went above normal for the first time since March of last year, as shown by the accompanying chart. This chart shows the percentage deviation of monthly truck production from a computed normal line, which normal line takes into consideration the natural growth of the industry and the effect of seasonal variations. In general, the shaded areas above the normal line indicate an abnormal rate of production while those below show a sub-normal output. It will be noted that the swing above normal in July ended a rather long period of sub-

normal production and apparently is an indication that the effects of abnormal operations in 1925 and 1926 have been pretty well absorbed.

Final production figures for August are not available as this is written but reports from the manufacturing centers indicate that July's high output rate was maintained during the month just ended. Consequently it is almost certain that output for the first eight months of this



Truck production crosses normal for the first time since March, 1927

year will be practically on a par with the corresponding period of 1927 as the seven-month total was 310,888 which was but three per cent under the figure for the same period last year.

This is a surprising record in view of the limited scale of truck production at the Ford plants. On August 1, 1927, Ford had produced about 100,000 trucks whereas in the same months of this year his output probably did not exceed 35,000 units. Of course, other makers have profited by the low rate of Ford operations. On the other hand, however, the selling effort put into the market by the Ford dealer organization naturally has not been what it would have been, had adequate supplies of trucks been available. When the huge size of the Ford selling organization is considered, and had it been active in the field, other makers might not have sold as many units but the total for the industry would have been higher. Incidentally Ford production up to August 1, amounted only to an average of about three trucks per dealer which is an indication of how inadequate the supply has been.

Based on the first six months only, retail sales of trucks are behind the same period last year by about 20 per cent. With Ford sales excluded, however, the remaining makers show an aggregate gain of about 20 per cent. The decrease in sales is larger than in production partly because the production comparisons given previously are based on eight

months, while the sales comparison covers only six months. July and August were both good months so that if sales figures were available to make a comparison as of September first, the relatively large drop in sales would be materially reduced. The increase in export business also is partly responsible for the apparent discrepancy between sales and production figures.

Among the makers showing sales gains during the first six months as compared with the corresponding period of last year, are Autocar, Brockway-Indiana, Chevrolet, General Motors Truck, International Harvester, Mack, Reo, Sterling and Stewart. For the same period, Ford sales show a drop from nearly 90,000 to less than 20,000 which, of course, explains the rather large decrease in the industry's total. Graham Brothers also ran behind last year in the first half but this was a temporary condition incident to extensive changes made in its line of trucks. Now that the six-cylinder models are coming through in quantity, the lost ground is being made up rapidly.

Sales have been relatively the best in the industrial Northeast, the agricultural Northwest and in the states bordering on Mexico. The first half of 1928 ran ahead of the same period last year in units sold in New Hampshire, Vermont, North Carolina, West Virginia, Ohio, Iowa, South Dakota, North Dakota, Montana and New Mexico. Considering the volume

(Turn to page 32, please)

Central Sales and Service Feature Reo's New Dallas Home

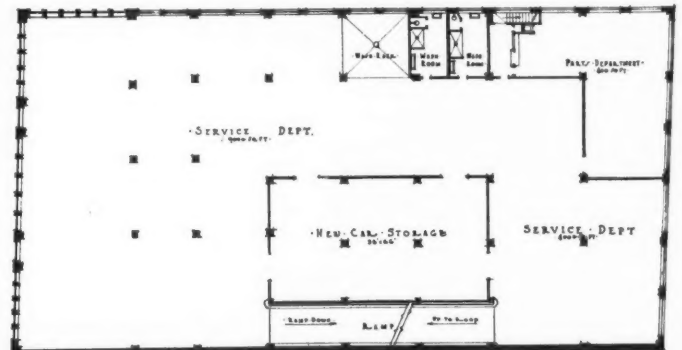
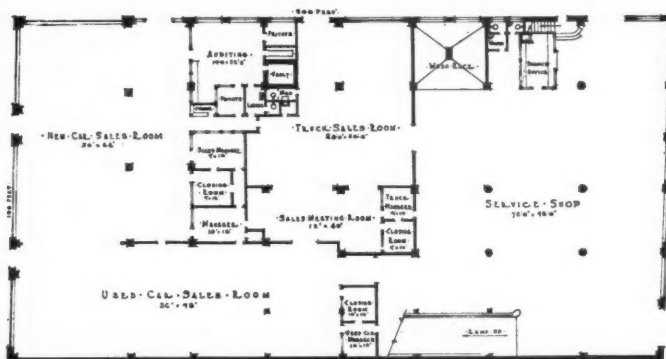


DESIGNED for the sale and service of trucks and passenger cars, the new \$250,000 building of the Reo Motor Car Co. of Dallas, Texas, is located in the heart of the automobile district. It is 100 x 200 ft., two stories high and faces two streets with a private street on one side. It is constructed of concrete and faced with buff brick and is equipped with easy-grade ramps running clear to the roof, which is finished for

parking more than two hundred trucks and cars.

The accompanying plan views of the first and second floors are largely self-explanatory and give a picture of the layout of the departments. The truck salesroom is located back of the new car salesroom and is large enough to display one truck of every capacity in the Reo line. A section of this room may be closed off by folding doors for the purpose of conducting sales meetings.

The entire front of the second story is used for service and is reached by ramp. Benches are arranged along the 100-ft. front of the building and along 100 feet of one side. Wash racks and wash rooms are located along the same side. The parts department, located in a rear corner, carries about \$50,000 worth of parts for servicing the entire Reo line. The center part of the second floor is used for storage of new vehicles and is separated from the other departments by partitions and sliding doors. R. D. Hilty is the general manager.



Plan views of the first and second floors of the new headquarters of the Reo Car Company of Dallas, Texas

The Editor's Notebook

Can You Use This Bonus Plan?

Much thought is being given currently to the relation between the method of paying mechanics and their productiveness. Numerous shops have adopted the piece-work plan where the men get a fixed rate for a given repair operation regardless of the time they spend on it. A few service stations are using group or other forms of bonus systems.

One of the simplest forms of incentive payment plans we have encountered consists simply of three five-dollar prizes which are awarded monthly. At the end of each month the service manager selects three operations and then goes to the job records to find the mechanics who have made the best time on the selected operations during the preceding month. Five dollars is awarded for the best time on each of the operations.

Obviously this plan tends to speed up the work all along the line for the reason that no one knows which operations will be selected for the bonus, as the selection is not made until after the records are in. Moreover, there can be no question of favoritism, as the operations are selected first and then the records are examined to determine the winner.

Waste at the Stockroom Window

Did you ever make a study to find out how much time the mechanics in your shop spend at the stockroom window waiting for essential parts or tools? Recently such a study was made by a manufacturer in several of his branches. The results of this study indicated that the amount of time spent in this manner represented a rather substantial waste. As a consequence, the whole question of stockroom operation was gone into very thoroughly and ways and means devised to speed up the filling of the requisitions for parts and tools so that high-priced mechanics would not be kept waiting at the stockroom window. This little incident is typical of the things that alert service station managers can do to reduce the costs of and increase the profits from maintenance.

By-Pass Highway Mileage Increasing

It used to be that every city, town and hamlet wanted major highways built so that their main streets would be a part of them. A suggestion from the state highway department that a major highway should go around rather than through a town, was certain to meet with opposition.

Times are changing. Communities have come to realize that a great mass of through traffic is not an asset; that the disadvantages of a through highway in the center of a town are greater than the advantages. As a result of this change of attitude, an increasing number of highways are being built in various parts of the country which pass through no towns or villages. Traffic is speeded up and made less hazardous as a result, and the towns and villages are relieved of the congestion and the expense of controlling the movement of vehicles within their limits.

Store Fixture Company Buys Bus Chassis

Ordinarily a company selling and installing store fixtures wouldn't be listed as a prospect for a bus chassis but there is a company in this line of business in the East which has bought several. This company operates in quite a large territory and it has the problem of getting the fixtures and the men who are to install them, from its factory to the store where the installation is to be made.

Of course any of the public transportation systems might be used for the fixtures and for the men, too, or the men might be transported in their own or company automobiles. However, any such plan would have drawbacks such as extra handling and cartage if the railroads were used. These drawbacks are all overcome by the bus. Its speed enables it to carry the men and the fixtures a considerable distance and still leave sufficient time for installation and the return trip in one day. In addition, the men and the fixtures arrive at the same time so that there is no wasted time, as there might be if public transportation were depended upon.—D. B.

Directed Selling Effort

Unusual Follow-Up System Helps Win National Prize for Seattle Dealer

THERE'S no doubt that the Lamping Motor Co., Seattle, Wash., is setting the pace in truck sales in the Pacific Northwest. In fact, this Western concern is one of the selling aces of the Reo organization. In competition with all other Reo distributors in the United States, the Lamping Motor Co. took first place in the March-April sales contest of the factory, registering 24.4 per cent of all trucks sold in King County. Furthermore, Nels Johnson, one of its salesmen, captured first honors for Speed Wagon salesmanship. On July 1, this organization was still leading the field. Furthermore, the firm sold 82 used trucks during May.

Four factors contribute toward this sales leadership, according to Arthur F. Folts, sales manager of the organization:

1. Providing salesmen with a localized Speed Wagon album, which enables them to lay before the prospect in tangible form, strong local endorsement.
2. A system of follow-up and work organizer that eliminates idle hours and misplaced efforts.
3. Major attention to developing proper bodies for specific purposes.
4. A policy of reconditioning and "dolling up" used trucks to make them attractive to prospects.

The first point outlined is simple enough but a more potent sales tool than many suspect—arming the sales-

and Mr. Smith have done. This is doubly true if Mr. Jones and Mr. Smith are prominent in their fields and known to the prospect. Hence convincing photographs of local fleets, with testimonial recommendations from operators is a valuable sales tool. This practice may savor of "cure-all" advertising, but it is well to remember that many manufacturers of nationally known products of undisputed merit, spent oodles of money in testimonial advertising—because it pays!

The system of follow-up and work organizer is really the backbone of this organization, which makes record-breaking a matter of habit. The most severe loss to truck salesmen, and many others, is the slipping away of time between interviews. The daily work organizer used by the Lamping Motor Co., reduces this wastage of time for its 23 retail salesmen to a minimum.

A follow-up system that in itself is worthy of description, is used. Mr. Folts prefers it to some other systems for various reasons. It gives both a close-up and bird's-eye view of each prospect, and the progress of each salesman. Furthermore this information is available for each day's work; all the information concerning a certain prospect is contained in one folder, and all the folders are filed according to salesmen, so that the management can get a cross reference in any manner desired. If it is desired to check up on the progress

Follow-up and work organizing forms used by the Lamping Company

LAMPING MOTOR COMPANY, INC. PROSPECT DEVELOPMENT REPORT

Name _____ Date _____
 Prospect Interested In _____ Next Contact Date _____
 Comments on Interview _____
 Salesman's Effort _____
 Called at house _____
 Called at office _____
 Telephone _____
 Demonstrated _____
 Appraised car _____
 Prospects Approach _____
 Called _____
 Telephone _____
 Written _____

LAMPING MOTOR COMPANY WORK SHEET

Info Unit (prospect)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug

Salesman _____

LAMPING MOTOR COMPANY, INC. NEW PROSPECT REPORT

Date _____ Next Contact Date _____

Salesman _____

Name _____ Business Address _____
 Res. Address _____ Occupation _____
 Prospect Interested In _____ Phone: Bus. _____ Res. _____
 Owns now _____ Make _____ Year _____ Is Trade Interest _____
 Our Appraisal _____ Body St. # _____
 Competition _____ Owner's Valuation _____
 Competitors Appraisal _____
 Demonstrated Model _____
 Source of Prospect _____

Salesman's Effort _____
 Called at house _____
 Called at office _____
 Telephone _____
 Demonstrated _____
 Prospects Approach _____
 Called at salesroom _____
 Telephone _____

COMMENTS _____

LAMPING MOTOR CO. WORK ORGANIZER

Salesman _____

Info _____
 Hours _____
 1 _____
 2 _____
 3 _____
 4 _____
 5 _____
 6 _____
 7 _____
 8 _____
 9 _____
 10 _____
 11 _____
 12 _____
 13 _____
 14 _____
 15 _____
 16 _____
 17 _____
 18 _____
 19 _____
 20 _____
 21 _____
 22 _____
 23 _____
 24 _____
 25 _____
 26 _____
 27 _____
 28 _____
 29 _____
 30 _____
 31 _____

New calls _____ Old calls _____
 Sales _____ Deliveries _____
 Demonstrations _____

The Work Organizer reduces waste time. Both sides of the new Prospect Report are shown. The Prospect Development report is used in connection with the larger report. The Work Sheet lists the daily calls of each salesman

man with a testimonial album in print and pictures. In principle, the truck buyer makes his purchase by observation and investigation, so he would like to believe, but as a matter of fact, a great many prospects are moved toward the dotted line by what Mr. Jones

with a certain prospect, that is possible with little effort; or if the sales manager wishes to check the entire work of a salesman

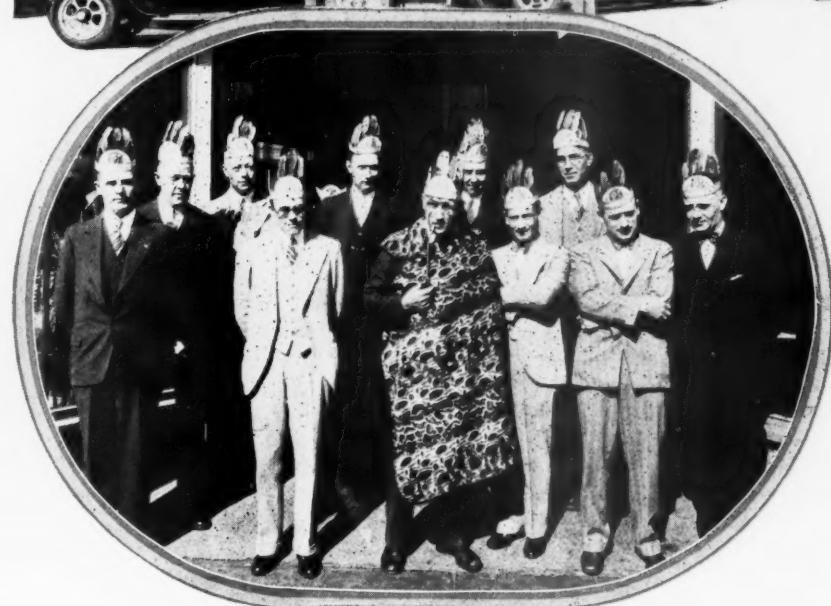
Gives Sales Leadership

By

Mandus E. Bridston



Fred Lamping, president, accepting check from local manager of Nalley's, Inc., to whom ten used trucks gathered from a former deal were sold



Chief Nels Johnson (with blanket) took first honors in the national Reo Contest. His tribe is composed of the Lamping sales force

for a week, a day, a month or six months, that is just as easy. Too often sales are lost because much is left to the judgment of the salesman. If the men are allowed to run wild, much effort is dissipated in lost motion. Sometimes a certain salesman will unconsciously fail to get the good will of a hot prospect. There may be a clash of temperaments—a wrong word, or some little thing that will keep the name off the sales contract. It may not be the salesman's fault always, but merely a failure to bring unlike natures into sympathetic harmony. That may mean a lost sale. The Lamping reports give a clue to that situation immediately, and it is corrected by switching salesmen.

Sometimes a salesman is so anxious to deliver the goods that he fails to detect a "dead one" and will waste a lot of good time in good faith. The sales manager with proper reports can avoid this lost motion.

Mr. Folts expressed the opinion that the average card index system is too compact—that cards are too small to carry sufficient information in detail. A brief, "not at home," "not interested," "too busy," and so on, doesn't mean much to the sales manager, but that's

about all the information that can be placed on the usual card index record.

The prospect card that Mr. Folts uses is of medium weight manila, 8 in. by 10 in., with a perforated line in the middle that permits folding. Thus it becomes a miniature folder, that can be filed away in drawers without being too bulky.

On one side of this folder is the "prospect report." This gives the date, and the next contact date at the top. The salesman's name, the name of the prospect and all the usual information such as, prospect interested in—owns now; make . . . is trade involved—appraisal—demonstrated, model—source of prospect. At the bottom is room for extended comments by the salesman. The distinctive feature of this prospect card is placed on the back of the folder, or when filed it would face the front of the cabinet. This side is divided into squares, one square for each day of the year. The months are listed in the left column, and the days of each month across the top. At the end of each day a clerk places a check in the square indicating the next interview date, as indicated by the salesman's daily report. For instance, if the salesman's report shows that he will call on Mr. Jones on Jan. 2 the first square on the card is checked. If a repeat call is to be made on Jan. 15, that square is checked.

In the morning, or the last thing in the evening, this clerk goes through the prospect file to make a list of the prospects to be called on that day. This is a simple procedure, for on the 17th, for example, the clerk disregards all squares except those under 17. It just takes a minute or two to run through the file and pick out the prospects checked for that day.

These are then subdivided according to salesmen, and segregated on a work sheet for each man. This work-sheet is 8 x 8½ in., so that it can be folded to pocket size. Then the Lamping "work organizer" comes into

the picture. This is a small card, 3 x 5 in. On the front is the name of the salesman, the date. To the left is listed the hours from 9 a.m. to 5 p.m. *Every* regular interview for a particular day is scheduled according to exact hours of the day, so that the day's work will be thoroughly organized, to prevent running in circles. On the bottom space is allotted for listing the number of new calls, old calls, sales, deliveries, demonstrations.

On the back of this card the salesman lists by name the new prospects called upon; names of prospects interviewed, and a summary of impressions of the day's work.

This "work organizer" helps the salesman make out his daily report at the end of each day. Sufficient is included to jog his memory. This daily report is the key to the efficiency of the Lamping system. It is not called a daily report, but a "Prospect development report." It is printed on thin paper, 4½ x 8 in.—just large enough to go into the prospect report folder, previously described.

This prospect report is large enough to give the sales manager full information about the progress with every prospect. One report, of course, is used for each interview, so that a salesman's daily report may consist of a number of report sheets, depending on the number of prospects he called on that day.

At the top of this development report is the date, prospect's name, next contact date, interested in, and then ample room at the bottom for comments about the deal. A prospect may have one or a dozen of such reports made out about him, depending upon how long

the salesman has been contacting him. Everyone of the development reports go into the folder allotted to the prospect, and hence the sales manager can get a bird's-eye view of the progress made. If something seems to be wrong, he investigates, and perhaps puts another salesman on the job. Sometimes he goes along with a salesman to interview a prospect, or sends a lieutenant to find out what's what. Two heads, in such a situation is better than one. Mr. Folts finds that switching salesmen in order to blend sympathetic temperaments is very effective as a stimulant to sales.

The third factor of sales success, as outlined by Sales Manager Folts, is development, through the assistance of body builders, the best type of milk body, the best type of produce body, the best type of ready-mix concrete body, the best type of furniture van body, the best type of ice cream body, and thereby supplementing the regular line of factory bodies with equipment suited to each vocation, and keeping these bodies on hand where salesmen can actually go to the prospect engaged in various lines of business and sell him the completed unit and deliver in the same day. The Lamping salesmen are trained in the study of vocational activities. They, as an organization, work in conjunction with body builders to bring to the highest degree of efficiency possible each kind of body, thereby having a considerable sales advantage.

This organization also follows vocational trends, and tries to anticipate the field of the greater activity in the beginning of the season. Last spring, the Lamping

(Turn to page 32, please)

Program for Mid-West Truck Congress

DETAILS for the coming Mid-West Motor Truck Transportation Congress, to be held in the Manufacturers Building at Indianapolis, Oct. 23 to 26, are reported to be rapidly rounding into shape, it has been announced by Congress officials.

The Motor Truck Association of Indiana, together with the Motor Truck Club of Kentucky and the Ohio Association of Commercial Haulers, is sponsoring the event. Joint annual conventions of the three bodies will be held simultaneously with the Congress.

Since an original meeting of the three sponsoring organizations in Columbus, Ohio, where Indianapolis was decided upon the scene of the sessions, the following additional organizations have endorsed it:

Nebraska Motor Transport Association; Minnesota Truck Owners Association; Wisconsin Truck Owners Association; Dakota Motor Carriers Association, and the Louisiana Motor Transportation Association.

Many and varied truck subjects, covering many phases of truck operation from all standpoints will be thoroughly discussed.

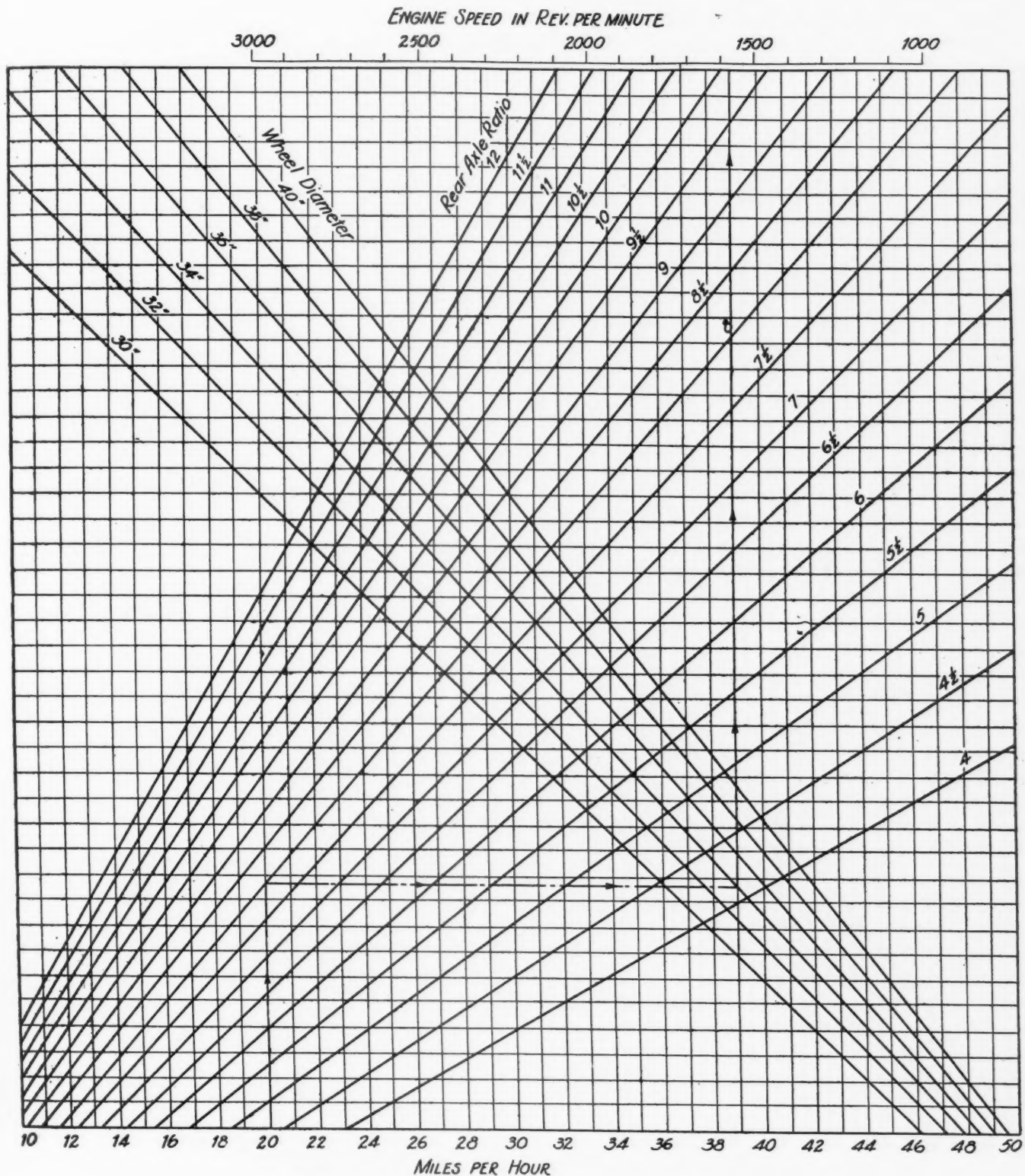
Following is a partial list of some "high point" subjects scheduled for discussion at the sessions: Coordination of Truck, Rail and Water Ways. Tire Equipment to Meet Road Weight Limitation Laws. City Street Conges-

tion; Traffic Rules; Safety Movements. How Far Trucks Can Use Existing Rail Classifications and Rates. Specialized Equipment to Meet Industrial Delivery, Transfer and Distribution Problems. Split Tariff Legislation and Regulation, Intra and Inter-State. Per-Package and Per-Route Mile Cost in Merchandise Delivery. The Relation of Truck Transportation to Warehousing. Investment; Earning Capacity; Cost of Maintenance. Types of Equipment and Accessories, etc.

In connection with the Congress, and included as a part of the many-angled assembly of "truck-minded" events and programs to take place throughout the duration of the Congress, will be an especially interesting exhibit of truck equipment and accessories. The display will be helpful to the purpose of the Congress in that the opportunity will be afforded visitors to see and study such equipment under the same roof housing the sessions.

Another feature on the program lies in the formation of a national association of state motor truck associations with the Congress as the nucleus of such an organization. The plan is designed to bring together the secretaries of the various associations so that all can benefit by each other's experience and knowledge and to bring about greater unity in action when facing common national problems.

How Fast *Does the* Engine Run?



To determine the speed at which the engine is turning over when the truck is running at any particular road speed, locate this latter speed on the bottom scale, proceed upward to the inclined line representing the rear axle reduction ratio, thence horizontally to the right or left to the inclined line representing the wheel diameter, and thence vertically to the scale at the top, where the engine speed can be read off.

To ZONE or NOT to ZONE

*A Dealer Who Has Made an Outstanding Success of the
Zone Plan Tells Why He Prefers It*

TO zone or not to zone?

What truck dealer or branch manager employing more than one salesman, has not puzzled over this question at one time or another? As a result some have decided to give each salesman a definite territory or zone which is his exclusively. Others have determined to stick to the open territory plan. Some who have tried the zoning plan, are continuing its use with every appearance of success while others have discarded it after a trial as being inferior to the open territory method.

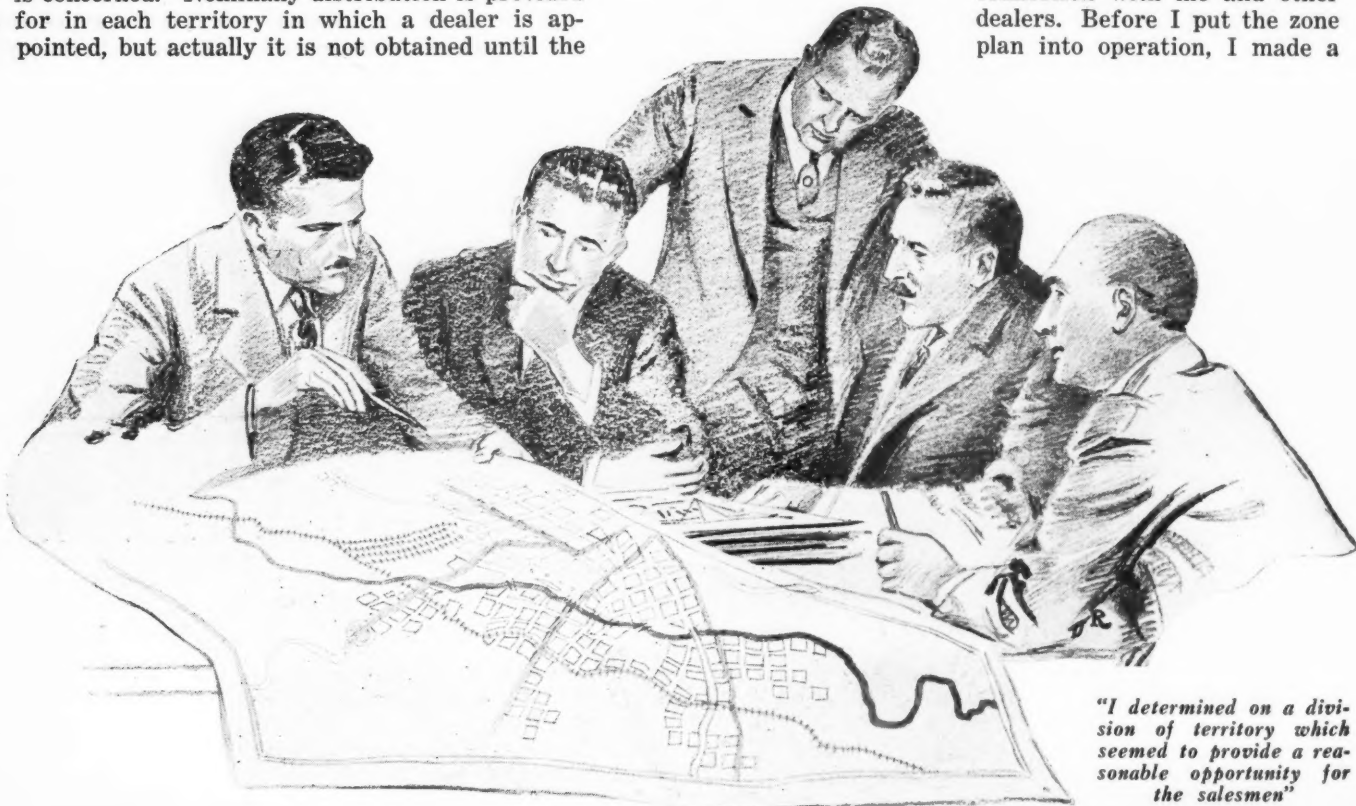
Recently in a discussion with a dealer who is making an outstanding success of the zone plan, he put his views on the subject about in these words:

"The dealer's problem of securing proper sales coverage of his territory is in some respects similar to that facing the factory in its efforts to get national distribution. As a general rule, the factories have adopted a policy of giving dealers exclusive sales rights in their respective territories. Granting these exclusive rights, however, does not end the matter so far as the factory is concerned. Nominally distribution is provided for in each territory in which a dealer is appointed, but actually it is not obtained until the

dealer is producing a volume of sales that is in proportion to the potentialities of the territory, competition considered. Consequently the factories watch carefully and constantly the sales records of each of its dealers, and where help is needed, endeavor to render it. If in the end sales do not measure up to the factory's idea of what they should be in a particular territory, it is quite likely that a new dealer will be appointed.

"While there are obvious differences between my sales problem and that of the factory, yet it seems to me that there is a similarity between the two. The factories in the main have found that they get most effective coverage by appointing exclusive dealers and in my own organization I have found that I can cover my territory more completely by zoning it and giving each salesman exclusive rights in one zone. In effect, as I see it, I make each salesman a sub-dealer under me operating in a definite area.

"Of course, I had to do the zoning very carefully and fairly and I have to keep a steady check on the sales record of each man just as the factory has to do in connection with me and other dealers. Before I put the zone plan into operation, I made a



"I determined on a division of territory which seemed to provide a reasonable opportunity for the salesmen"

detailed analysis of the sales possibilities, studied what I had sold and what my competitors had sold. As a result, I determined on a division of the territory which seemed to provide a reasonable opportunity for the salesmen. Changes within the territory have made some alterations in the original plan desirable from time to time, but for the most part the zones follow the original lines. If the zone plan is to be a success, this division of the territory must be right and careful study is the only way to make it right.

"Inasmuch as under the zone plan the salesmen do not compete among themselves as they do under the open territory plan, some substitute for this internal competition must be found. In the zone plan instead of competing among themselves to some extent, the salesmen are competing entirely with my competition. Consequently I depend largely on the results they obtain in the face of this competition to act as a stimulant to greater effort.

"To do this I keep accurate records of all registrations of new trucks in my territory and classify them by zones. As a result I am able to tell at any time how many trucks have been sold in each zone and how many of each make. With this information obviously it is simple for me to place responsibility.

"Take the case of a lost sale when the men operate on open territory. If no prospect card has been filed on the buyer, the entire sales force is responsible and what is everyone's responsibility usually turns out to be no one's. Under the zone plan, all I have to know is the buyer's address to determine who is responsible.

"Perhaps it takes a little more time and effort to manage a sales force on the zone basis. However, I feel that the extra effort is worth while because I believe I get more intensive coverage of the entire territory than I would otherwise. A man working a zone can't get by simply by skimming the cream because the record of sales made by competition in his zone shows up exactly what is happening. Neither does a man spend a considerable part of his time traveling around my whole territory chasing "hot" prospects and thus have little or no time to do the digging and intensive development work that is necessary if I am to capitalize my sales possibilities. Each of my salesmen is a sub-dealer under me and he knows he has to produce to hold his franchise just as I have to produce to hold mine.

"Successful selling on the zone system is based, first, on the skill with which the territory is zoned and, second, on the keeping of accurate records of sales made in each zone. The first is necessary to make the plan fair to the men and the second to check the performance of the men so that help can be offered or pressure exerted where necessary to produce sales."

The foregoing discussion, of course, presents some of the arguments favorable to the zone system. Unquestionably it has much to recommend it but, on the other hand, the open territory plan has its advantages or it would not be so widely used. COMMERCIAL CAR JOURNAL will welcome letters from readers discussing this important phase of sales management.

What do you think?

In Step With the Spirit of the Times

Automobile Trade Journal and Motor Age Are Being Combined

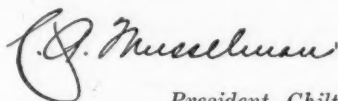
Automobile Trade Journal, the oldest and leading monthly publication in the industry, and *Motor Age*, the leading weekly, are being joined in one strong, outstanding publication worthy of America's leading industry. Concentration on this one publication of all of the money, effort and initiative previously resulting in two outstanding publications will make possible a new leadership unique in character and powerful in performance.

Editorially the new publication will render an unrivaled service to automotive retailers. It will be manned by the largest and most experienced staff ever concentrated on a single monthly automobile trade publication. It will be full of practical, useful ideas and information from cover to cover. The material will be presented in such a way as to make possible maximum use with minimum effort on the part of the reader. Its pages will be bright, attractive and readable, but also packed with important material concerning trade facts,

methods and events. Backed by the full facilities of the world's largest automotive publishing house, this new publication is expected to set new standards in business paper editing.

The new *Automobile Trade Journal and Motor Age* monthly will have more than 60,000 paid trade circulation. We question if there is any trade journal in the United States, or elsewhere, that can match it in quantity and quality of circulation. Sixty thousand trade units represents a buying power of over 85 per cent of America's largest industry, and to be able to cover all buying sources in this trade to within 15 per cent of the total, is an accomplishment well worth while.

Throughout the automotive industry mergers and consolidations have been making for greater marketing efficiency, for better products and for greater dollar-for-dollar value. This combination of the two leading publications of the industry is distinctly in step with the spirit of the times.



President, Chilton Press Journal Co.

How to Service Timken Front End Bearings

Alignment of Front Wheels Depends Upon Proper Adjustment of Wheel and Axle Bearings

By James W. Cottrell

THE attention which has been directed to the importance of front end alignment because of its effect on tire wear has also emphasized the value of operations allied with alignment of the front wheels. Included in the latter classification are jobs such as adjustment of wheel bearings and thrust bearings of steering knuckles and replacement of worn knuckle pins and bushings.

Front wheels cannot be lined up accurately if the knuckle pins and bushings are worn or the wheel bearing and thrust bearings are badly in need of adjustment. Instructions concerning the alignment of front wheels usually commence with the suggestion that all play or lost motion in the front end be eliminated before alignment is measured or corrected. As any undue tire wear is likely to bring a vehicle owner to the shop for an inspection there is a

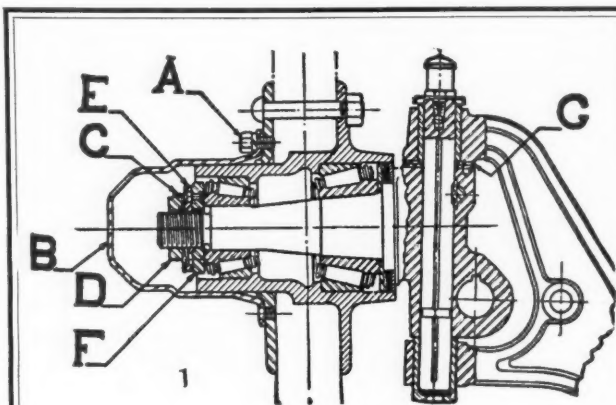
good opportunity for selling a job on the front end in case the parts mentioned are found to be worn.

Wear of parts about the steering knuckle shows up in two ways: a vertical movement, which shows the amount of looseness in the thrust bearings and a rocking movement, which indicates looseness in fit between knuckle pin and bushings.

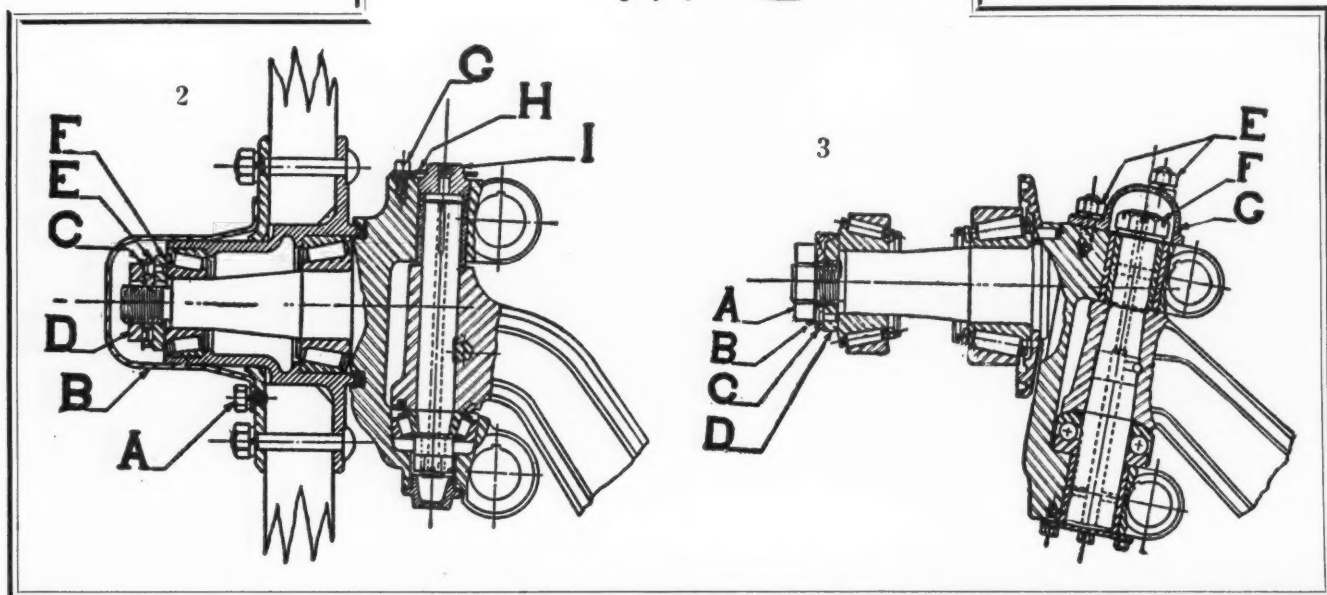
Thrust bearings are of three types: washers, roller bearings and ball bearings. Each of these types of bearings may be used in construction of the "Elliott" type axle or the "reverse Elliott." The Elliott type axle is a yoke extending above and below the knuckle, as shown in Fig. 1, while in the reverse Elliott type the knuckle is yoked and it extends over the end of the axle as indicated in Fig. 2.

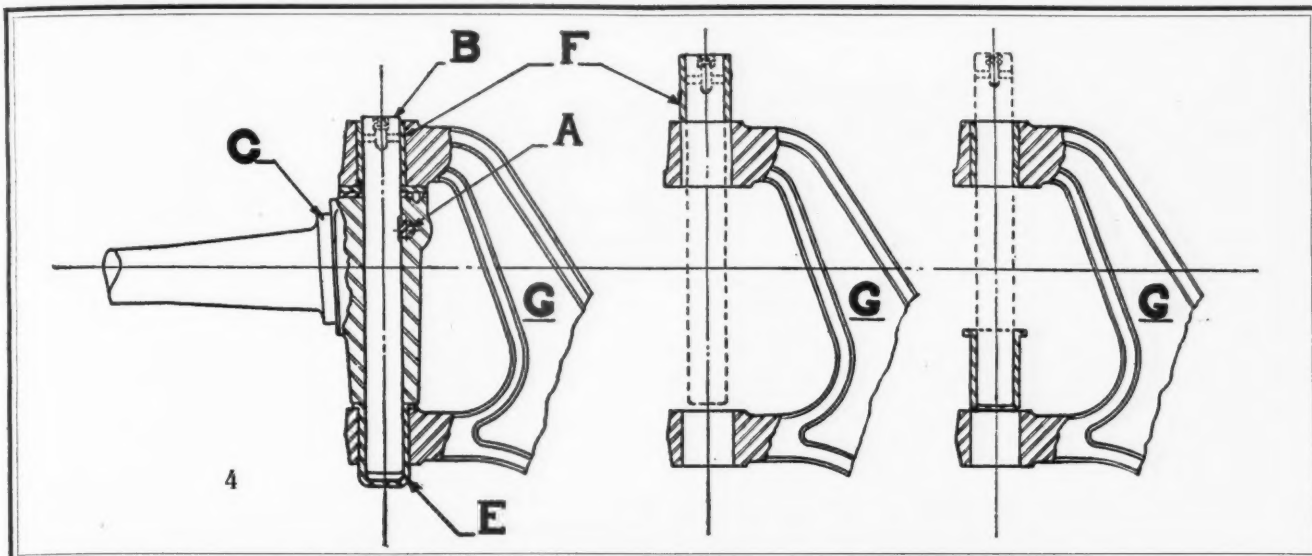
Due to the fact that the weight of the vehicle keeps the thrust bearings in contact, under ordinary condi-

At right—Elliott-type axle with thrust washers at G. Below—Reverse Elliott axle with yoked knuckle and roller thrust bearing



Below—A Reverse Elliott-type axle with ball bearing thrust assembly. The inclination of the king pin is common on front wheel brake construction





Showing method of rebushing axle and installing new pins. The king pin is retained by lock A, at left. After the pin has been removed the upper bushing is pressed out and a new bushing pressed in, using the new pin in the opposite bushing as a pilot

tions, the adjustment of these bearings is often neglected. However, in going over even small rough places there is a pounding action on these bearings, somewhat like the action of a loose connecting rod bearing. Adjustment at this point, therefore, should be checked whenever front end alignment work presents an opportunity for it. Procedure for adjustment of three types of thrust bearings and for replacement of knuckle pins and bushings on Timken axles, and adjustment of wheel bearings based upon factory recommendation follows:

Thrust Washers

When thrust washers are worn they should be replaced with new washers. Clearance with new washers is approximately .004 in. See Fig. 1.

Timken Bearings

A reverse Elliott type axle with Timken roller thrust bearings is shown in Fig. 2. This type of bearing is adjusted by forcing the bushing in the upper part of the yoke of the steering knuckle against the axle which moves the bearing cup nearer the cone. Clearance should be from .003 to .005 in. To make the adjustment remove screw G and lock H. Tighten nut I, being careful not to tighten too much.

In the Elliott type axle the bearing is on top of the knuckle and the bearing cup is carried in the upper yoke of the axle. Adjustment of this type bearing is made by tightening a nut on the bottom of the knuckle pin.

Ball Bearings

A ball type thrust bearing on a reverse Elliott axle is shown in Fig. 3. To make an adjustment remove the cover G by unscrewing the nuts E. Then take off the nut F and the key located in the center of the knuckle. This key is a taper pin which should be driven

out by a hammer and drift or punch. The dust cap on the bottom of the knuckle is then taken off and the knuckle pin taken out. Adjustment is accomplished by adding shims of the required thickness between knuckle and ball bearing. Clearance should be from .003 to .005 in.

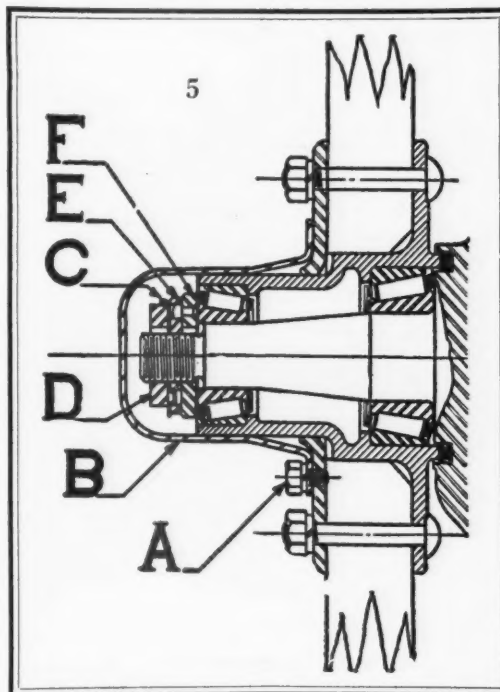
To replace steering knuckle pins and bushings in an Elliott type axle take out the draw key, shown at A in Fig. 4, and then drive out the pin B, after which the knuckle can be removed. To replace the bushings the new knuckle pin is used as a pilot for the new bushings. After the top bushing has been pressed out the new bushing is pressed into place using the new pin as a pilot in the lower bushing. The lower bushing is then pressed out and the pin is inserted in the new top bushing and used as a pilot while pressing the new lower bushing into place.

The same general principles are followed in the case of bushings in reverse Elliott axles. Roller bearing cups in axle yokes are difficult to remove and they cannot be reached by drift or punch. A special type puller is required for this job.

In connection with the removal of the knuckles, and with front end alignment jobs, adjustment of front wheel bearings is required. The following explanation of procedure will be simplified if reference is made to Fig. 5. Perform the following operations in order: remove hub cap B by taking out cap screws A, jack up wheel, wipe grease from end of spindle, straighten thin jam nut locking washer C, take off outer jam nut D, remove thin locking washer and ring E and bearing adjusting nut F. Pull wheel outward to remove bearing, remove wheel.

After cleaning bearings and inside of hub replace the inner bearing and cover it with grease and put grease in the space in the hub between the two bearing cups.

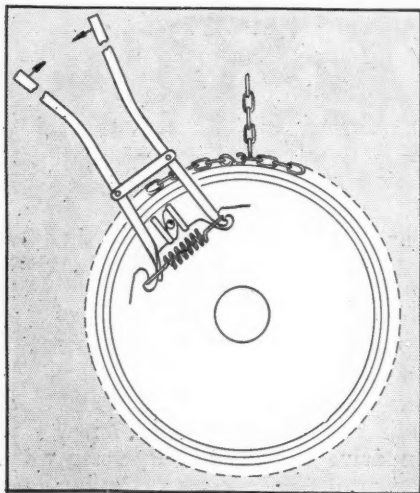
(Turn to page 32, please)



Cross section of front wheel with Timken roller bearings

C. C. J. Shop Hints

Your idea in print will
return five dollars



Removing brake springs with special tool

Turning Clutch Disks

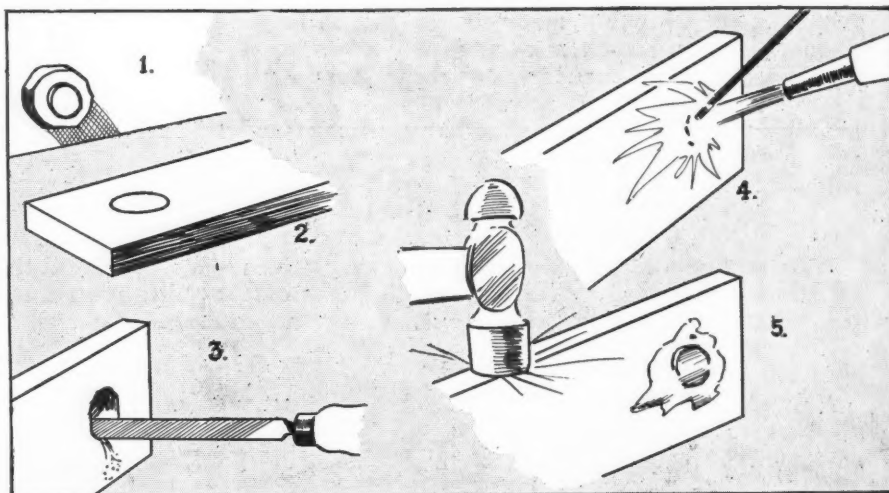
Worn disks from multiple disk clutches are salvaged in the New York City Central Motor Repair Shop by means of a magnetic chuck on a lathe. As shown in the illustration a light cut is taken off the face of the disk while it is held against the face of the chuck. The cut is just deep enough to remove grooves or low spots and the disk is then turned over and a cut taken on the

opposite side. When the clutch is assembled extra end disks are inserted to make up for the reduced thickness of the reconditioned disks.

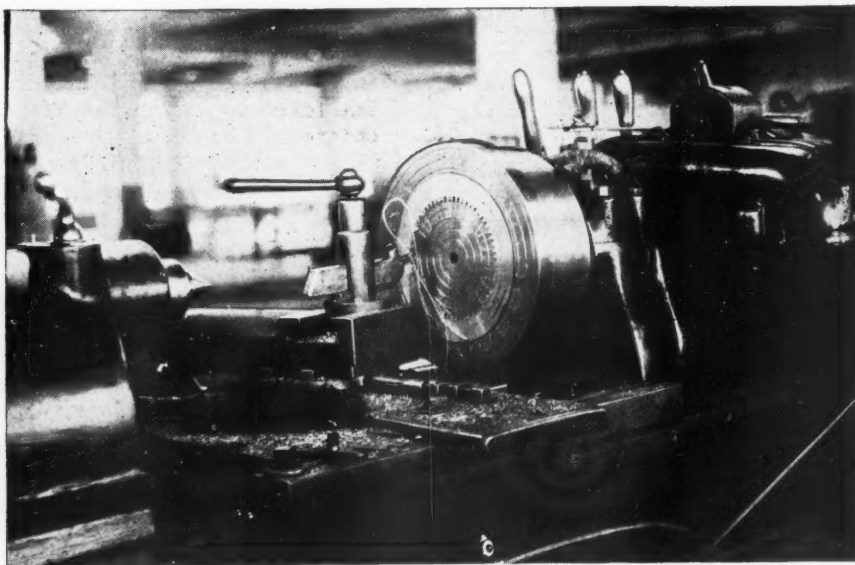
Removing a Nut

A method of removing large nuts such as differential or pinion bearing adjusting nuts which are stuck and cannot be moved by monkey or pipe wrenches is used by Walter L. Hillyer,

Adams & Hillyer, Inc., New London, Conn. He welds or brazes a piece of flat iron to the nut and loosens it by hammering on the end of the iron. The drawing shows the steps in the operation. A hole is bored in the iron bar somewhat smaller in diameter than the nut, Fig. 2. The hole is filed out to an approximate fit over the nut, as shown in Fig. 3. The bar is hammered over the nut and welded or brazed to it as in-



A flat bar welded on is used to remove a nut which is stuck tight



Turning a clutch disk in a lathe by means of a magnetic chuck

Fig. 4. The nut is then loosened by hammering on the end of the iron bar, as in Fig. 5. Mr. Hillyer states that the heat of welding or brazing helps to loosen the nut and that the system has never failed.

Brake Spring Tool

A tool which can be made without difficulty in a shop is employed by Hugh Tift, Skinner Transfer Co., Watertown, S. D., to remove brake shoe springs from Timken axles. These springs exert much tension and are difficult to remove by ordinary means. The tool is made of two pieces of 3/16 by 1 in. iron and a shorter crosspiece, as shown. The end of one piece is twisted one-quarter turn and cupped a little so that it will fit against the hook on the end of the brake shoe. On the other piece the end is ground to a hook to engage with the hooked end of the spring.

Commercial Car Journal

Flat Rate Price List Number 21

Clutches* and Transmissions

CLUTCH BROCKWAY

Models†

1. Clutch, adjust pedal\$ 1.00
2. Clutch, wash out and adjust ... 2.50
3. Clutch assembly remove and replace, unit powerplant, when power takeoff does not interfere 10.00
- (B) Clutch assembly remove and replace, unit powerplant, when power takeoff interferes 11.00
- (C) Clutch assembly remove and replace, amidship transmission... 8.50
4. Clutch release bearing, renew .. 12.00
5. Clutch rings or facings, renew .. 18.00
6. Clutch rings or facings, renew when clutch is out 4.00
7. Clutch assembly overhaul, unit powerplant, when power takeoff does not interfere 18.00
- (B) Clutch assembly overhaul, unit powerplant, when power takeoff interferes 20.00
- (C) Clutch assembly overhaul, amidship transmission 16.50

STUDEBAKER

¾ Ton Delivery

1. Clutch, adjust pedal or clutch brake\$ 0.40
2. Clutch, wash out and adjust..... 1.65
3. Clutch assembly remove and replace, unit powerplant, when power takeoff does not interfere... 10.65
4. Clutch release bearing, renew... 6.50
5. Clutch rings or facings, renew... 10.50
7. Clutch assembly overhaul, unit powerplant, when power takeoff does not interfere 11.50

TRANSMISSION

ARMLER

1. Transmission assembly remove and replace, unit powerplant\$ 4.50
- (B) Transmission assembly remove and replace, unit powerplant with hoist 7.50
2. Drain, clean and inspect transmission (except on dump body trucks) 3.75
3. Overhaul, including control assembly, unit powerplant 19.50
4. Control assembly only overhaul. 4.50
5. Transmission assembly remove, disassemble, reassemble and reinstall, unit powerplant 10.50
- (B) Transmission assembly remove, disassemble, reassemble and reinstall, unit powerplant with hoist 15.00
6. Speedometer drive gear assembly, renew (does not include drive gear on transmission shaft)..... 1.50

BROCKWAY

Models†

1. Transmission assembly remove and replace, unit powerplant ...\$10.00
- (B) Transmission assembly remove and replace, unit powerplant with hoist 12.00
- (C) Transmission assembly remove and replace, amidship transmission without power takeoff .. 10.00
- (D) Transmission assembly remove and replace, amidship transmission with hoist or power takeoff 10.00

* Clutch prices are continued from the August issue, page 20.

† Models Brockway Junior, JF, CJB, E, CJB, EN, EYW, S, SY and KW have unit powerplants. Models K, KR, R, RT, T, T-18 and BT have amidship transmissions.

- (G) Auxiliary transmission remove and replace, when mounted amidship 7.50
2. Drain, clean and inspect transmission (except on dump body trucks) 4.50
- (B) Drain, clean and inspect transmission, dump body truck 6.00
3. Overhaul, including control assembly, unit powerplant 20.00
- (B) Overhaul, including control assembly, unit powerplant with hoist 22.00
- (C) Overhaul, including control assembly, amidship transmission without power takeoff 20.00
- (D) Overhaul, including control assembly, amidship transmission with hoist or power takeoff 22.00
- (G) Auxiliary transmission overhaul, including control assembly, when mounted amidship 20.00
4. Control assembly only overhaul. Unit powerplant 4.00
- (B) Control assembly only overhaul amidship transmission 6.00
5. Transmission assembly remove, disassemble, reassemble and reinstall, unit powerplant 22.00
- (B) Transmission assembly remove, disassemble, reassemble and reinstall, unit powerplant with hoist 23.50
- (C) Transmission assembly remove, disassemble, reassemble and reinstall, amidship transmission without power takeoff 20.00
- (D) Transmission assembly, remove, disassemble, reassemble and reinstall, amidship transmission with hoist or power takeoff..... 22.00
- (G) Auxiliary transmission remove, disassemble, reassemble and reinstall, when mounted amidship 18.00
6. Speedometer drive gear assembly, renew. (Does not include drive gear on transmission shaft.) ... 4.50

CHEVROLET

Capitol 1-Ton

1. Transmission assembly remove and replace, unit powerplant\$ 4.00
2. Drain, clean and inspect transmission (except on dump body trucks) 1.25
3. Overhaul, including control assembly, unit powerplant 8.00
4. Control assembly only overhaul.. 1.50
6. Speedometer drive gear assembly, renew,
B series 3.25
F series 4.00

DODGE BROTHERS

1. Transmission assembly remove and replace, unit powerplant
114 in. wheelbase\$ 7.90
When engine support must be removed 10.80
Plate clutch and torque tube drive
Plate clutch and open drive 4.25
2. Drain, clean and inspect transmission (except on dump body trucks) 1.80
3. Overhaul, including control assembly, unit powerplant
114 in. wheelbase 12.80
When engine support must be removed 15.60
Plate clutch and torque tube drive 10.25
Plate clutch and open drive 9.25
4. Control assembly only overhaul.. 5.50
5. Transmission assembly remove, disassemble, reassemble and reinstall, unit powerplant
114 in. wheelbase 13.75
When engine support must be removed 16.75
Plate clutch and torque tube drive 11.25
Plate clutch and open drive..... 10.00

DURANT

Commercial Chassis

1. (C) Transmission assembly remove and replace, amidship transmission without power takeoff ..\$ 7.00
2. Drain, clean and inspect transmission (except on dump body trucks) 1.25
3. (C) Overhaul, including control assembly, amidship transmission without power takeoff 10.00
4. Control assembly only overhaul. 1.25
5. (C) Transmission assembly remove, disassemble, reassemble and reinstall, amidship transmission without power takeoff 8.00
6. Speedometer drive gear assembly, renew, includes removal of universal joint 1.75

FORD

Model T

3. Overhaul, including control assembly, unit powerplant\$14.00
- (H) Overhaul after removal from engine 4.00

F.W.D.

Three-speed transmission

1. (C) Transmission assembly remove and replace, amidship transmission without power takeoff...\$12.00
- (D) Transmission assembly remove and replace, amidship transmission with hoist or power takeoff 15.00
- (D) Transmission assembly remove and replace, when mounted amidship 18.00
2. Drain, clean and inspect transmission 3.00
3. (C) Overhaul, including control assembly, amidship transmission without power takeoff 52.50
- (D) Overhaul, including control assembly, amidship transmission with hoist or power takeoff 52.50
- (G) Auxiliary transmission overhaul, including control assembly, when mounted amidship 30.00
4. Control assembly only overhaul.. 4.50
5. (C) Transmission assembly remove, disassemble, reassemble and reinstall, amidship transmission without power takeoff 37.50
- (D) Transmission assembly, remove, disassemble, reassemble and reinstall, amidship transmission with hoist or power takeoff.... 45.00
- (G) Auxiliary transmission remove, disassemble, reassemble and reinstall, when mounted amidship. 30.00

F.W.D.

Five-speed transmission

1. (C) Transmission assembly remove and replace, amidship transmission without power takeoff...\$15.00
- (D) Transmission assembly remove and replace, amidship transmission with hoist or power takeoff 15.00
2. Drain, clean and inspect transmission 3.00
3. (C) Overhaul, including control assembly, amidship transmission without power takeoff 60.00
- (D) Overhaul, including control assembly, amidship transmission with hoist or power takeoff 67.50
4. Control assembly only overhaul. 4.50
5. (C) Transmission assembly remove, disassemble, reassemble and reinstall, amidship transmission without power takeoff 45.00
- (D) Transmission assembly, remove, disassemble, reassemble and reinstall, amidship transmission with hoist or power takeoff 52.50
6. Speedometer drive gear assembly renew75

New Trucks of the Month

Amer.-LaFrance

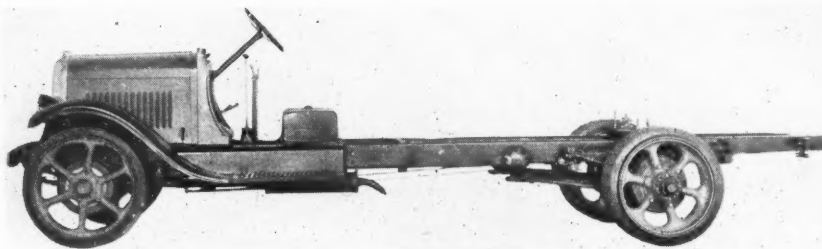
ANNOUNCEMENT has been made by the American-LaFrance & Foamite Corp. of a new five-ton model designed for heavy duty service. Known as the "Big Chief" this new unit is offered in three wheelbases, 196, 226 and 242 in. It is powered by a $4\frac{1}{2}$ x 6 in. six-cylinder engine developing 114 hp. at 1600 r.p.m.

It has a 14 in. single plate clutch, four-speed transmission, three bevel gear type differential and steering mechanism with double reduction gears. Springs are of chrome-silico-manganese steel and the frame of heat-treated, chrome-nickel pressed steel. Standard equipment includes electric lights, combination tail and stop light, electric horn, starter, front bumper, speedometer, disk wheels, spare wheel and carrier.

G. M. C.

AN improved and expanded line of G.M.C. trucks, ranging in capacity from $1\frac{1}{2}$ to 4 tons, powered with Buick engines, is announced by the General Motors Truck Company. The $1\frac{1}{2}$ and 2-ton models are powered by the smaller Buick engine and equipped with spiral bevel gears, while the 3 and 4-ton models are equipped with the larger Buick engines and Timken worm drive axles. All four have Bendix four-wheel internal brakes and four-speed transmissions. The one-ton Buick-engined truck has been discontinued.

The various models are designated as follows: The T-30 is of $1\frac{1}{2}$ -ton capacity and is offered in three wheelbases ranging from 136 to 164 in. with chassis prices from \$1,395 to \$1,485. The two-ton truck, with prices from \$1,685 to \$1,760 for four wheelbases ranging



Side view of the T-60, 3-ton G.M.C. Buick engined truck

from 136 to 175 in., is called the model T-42 and is a development of the T-40. The T-60 and T-80, of three and four-ton capacity, respectively, are developments from the smaller trucks and replace the K-54, K-56 and K-72. Offered in four wheelbases, ranging from 140 to 200 in., the prices of T-60 equipped with solid tires range from \$2,585 to \$2,685; with pneumatic tires from \$2,800 to \$2,900. Model T-80 is offered in four wheelbases of the same range, listing from \$2,765 to \$2,865 when equipped with solid tires and from \$3,160 to \$3,260 when equipped with pneumatic tires.

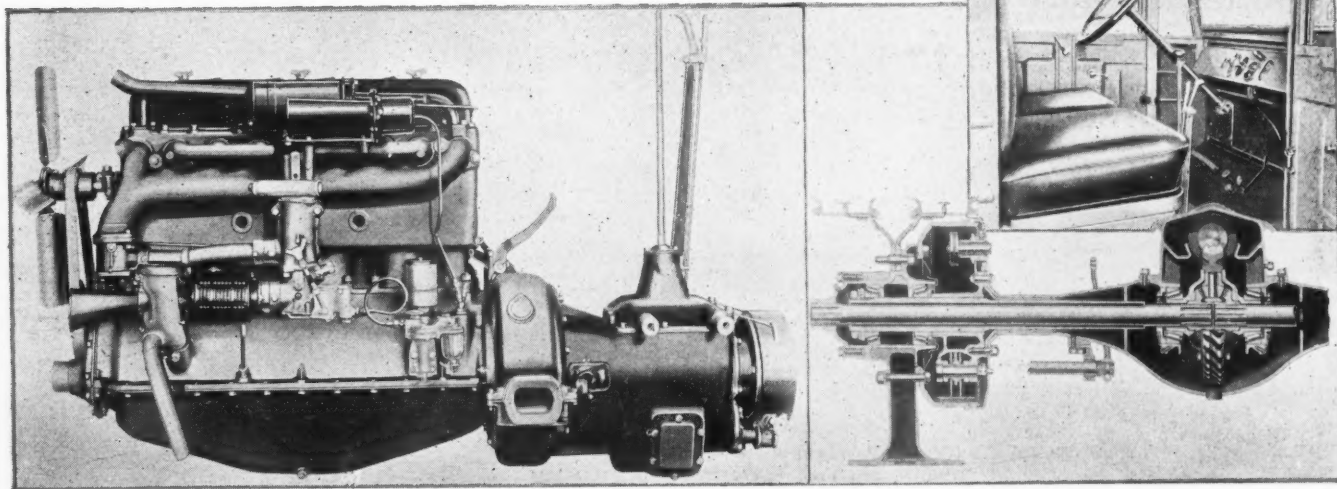
Similarity in design characterizes all four models. The T-30 and T-42 models are equipped with the smaller Buick engines of $3\frac{1}{2}$ x $4\frac{1}{2}$ in. bore and stroke. The larger $3\frac{5}{16}$ x $4\frac{1}{2}$ in. is used in the T-60 and T-80 models. Both are governed at 2500 r.p.m. by a suction operated governor at which speed they develop $72\frac{1}{2}$ and 89 horsepower, respectively.

Important new chassis features include a new type of double disk clutch with thick driving plates to obtain good thermal conductivity, four-speed transmission, a propeller shaft parking brake with four-wheel internal Bendix service brakes, straight line propeller shaft drive, self-adjusting tie-rods, a combina-

tion spring and rubber engine mounting and fore and aft tapered frames. The two light models have spiral bevel drive rear axles similar to those used on the previous model T-40, while Timken worm drive axles are used in the T-60 and T-80. Drive in the latter models is taken through radius rods, while the lighter models use Hotchkiss drive.

An increase in power in the Buick engines, which formerly developed 63 and 78 hp. respectively at 2800 r.p.m., has been obtained by increased piston displacement and other changes in design. Taking the engines individually, the smaller model has a $3/16$ in. larger bore and $\frac{1}{8}$ in. longer stroke, with a piston displacement of 239.1 cu. in. and a rating of 26.33 hp. The other changes include $\frac{1}{8}$ in. larger valves, both inlet and exhaust now having a clear diameter of $1\frac{3}{16}$ in., an increase in valve lift from .322 to .337 in., rounding off of inlet manifold corners and adoption of a new Marvel carburetor, having two high-speed jets and a $1\frac{5}{16}$ in. venturi.

The crankshaft is heavier with main bearings increased from $2\frac{1}{4}$ to $2\frac{3}{8}$ in. in. diameter, although main bearing



Left side of smaller Buick engine used in the T-60 and T-42, showing the fuel system and suction operated governor. Section of Timken worm drive axle used on the T-60 and T-80. Cabs are standardized on all four Buick engined trucks

lengths are slightly less than before. A feature of the shaft is the use of steel-backed babbitt-lined interchangeable main bearings. Crankpins are also $\frac{1}{8}$ in. larger, with a $2\frac{1}{8}$ in. diameter. Piston pins are increased from $\frac{3}{4}$ to $\frac{7}{8}$ in. in diameter. The oil ring is now $\frac{3}{16}$ in. wide as against $\frac{1}{8}$ in. formerly and of the two-slot type.

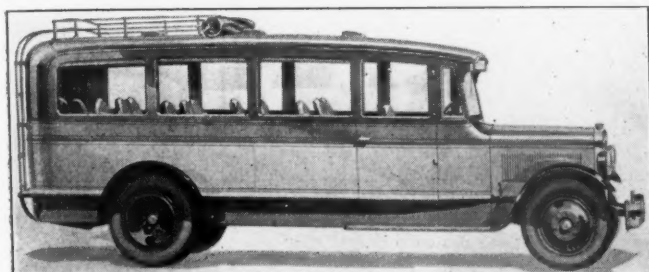
A higher lift camshaft incorporates new quieting contours and its bearing area has been increased. It also has a separate eccentric for driving the AC fuel pump, standard on the expanded line of G.M.C. trucks.

Changes and improvements in the larger engine follow the same lines. Bore is increased $\frac{1}{8}$ in. and stroke $\frac{1}{4}$ in. with a piston displacement of 309 cu. in. as against 274 formerly. Although the valve size in this model has not been increased the passages through which the mixture passes are larger, due to the higher lift camshaft, resulting in

inside and $8\frac{1}{2}$ in. outside diameter are riveted to each driven plate, these being in turn riveted to individual hubs. Total frictional area is 140 sq. in. and maximum break-away torque is stated to be 637 lb.-ft. Another feature of the clutch is its mounting in ball bearings inside the flywheel bell-housing. Thrust release bearings are also of the ball type.

As previously mentioned four-speed transmissions are standard on all models. These are made by Muncie Products and are of the standard shift type with a latch out position to the left and forward for extreme low. The transmissions on the T-30 and T-42 are interchangeable as are those on the T-60 and T-80, the two units being similar design but heavier in the larger models. Both main and counter shafts are mounted in anti-friction bearings. Reverse engagement is by shifting the reverse idler gear on its shaft. Gear reductions are as follows:

Graham Brothers 16-passenger parlor coach



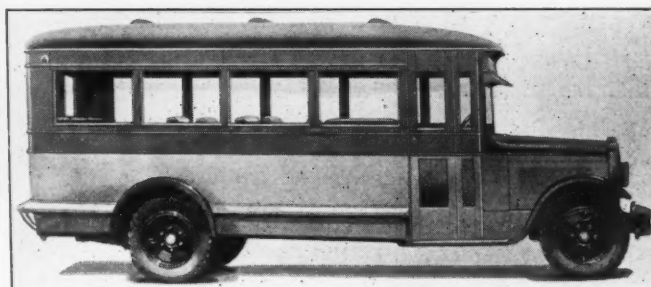
better volumetric efficiency. Contributing also to an increase in power is an increase in inlet manifold diameter of $\frac{1}{16}$ in., the same being true also of the new Marvel carburetor, which has a venturi of $1\frac{9}{16}$ in. diameter. Exhaust ports are also $\frac{1}{8}$ in. larger with $\frac{1}{4}$ in. larger exhaust pipe to decrease the back pressure.

Main bearing diameter with the steel-backed shells and caps and crankpins are $\frac{1}{8}$ in. larger at $2\frac{1}{2}$ in. and $\frac{3}{8}$ in. respectively. Here also the total main bearing length is decreased somewhat due to the heavier shaft and thicker crank cheeks. Compression ratio has been increased partially through the use of a longer connecting rod $11\frac{1}{4}$ in. between centers, and a slightly longer piston.

All models are equipped with an oil filter, air cleaner, crankcase ventilator of the induced draft type, and fuel strainer, mounted in unit with the fuel pump. The 3-point engine mounting is retained but the front trunnion mounting is now so designed that the rubber disks take downward vibration forces, while springs under the nut heads of the trunnion mount belts take the upward forces. The radiator also is mounted on cushioned rubber disks. Flexible metal clad hose, "Tite-Flex," is used for the oil gage pipe line.

The new twin disk clutch developed for these trucks is characterized by unusual thick driving disks of which the center is $\frac{3}{8}$ in. wide and of the floating type and the rear has a width of $1\frac{1}{2}$ in., to provide good heat dissipation. Two facing disks of $4\frac{1}{2}$ in.

New 21-passenger street car type bus



	T-30-42
First	5.09 to 1
Second	3.29 to 1
Third	1.76 to 1
High	Direct
Reverse	5.44 to 1

	T-60-80
First	6.18 to 1
Second	3.81 to 1
Third	1.78 to 1
High	Direct
Reverse	6.51 to 1

On the T-60 and T-80 auxiliary transmissions located amidship are available. These offer an additional reduction of 1.5 to 1.

Propeller Shaft Brake

Back of the transmission is located the propeller shaft parking brake with 3 in. width of lining, $\frac{1}{4}$ in. thick. Propeller shafts on the $1\frac{1}{2}$ and 2-ton models are of the one piece and on the three and four-ton, of two piece construction, all using Spicer grease type universal joints. In all jobs maximum angularity under operating conditions for any part of the propeller shaft is designed to be less than $3\frac{1}{2}$ degrees. On the two-piece propeller shaft the center bearing is so designed as to take only radial loads, the thrust load being taken by the main transmission bearing. Front axles on the T-30 and T-42 are heavier than formerly, being similar to those used last year on the T-40 and 50. Rear axles on the lighter models are similar to those used on the former model T-40, 2-ton truck, while those on the T-60 and 80 are of the same general design as those used in the former models K-54 and K-56 except for the

new brake mountings, etc. Ratios are as follows:

Model	Standard Ratio	Official Ratio
T-30	5.63	5.11 6.43
T-42	6.57	6.14 7.13
T-60	7.28	6.00 8.50
		9.35 10.67
T-80	8.50	6.00 7.25
		9.33 10.67

The four-wheel Bendix brakes used on all four models are all of similar design and of the 3-shoe internal type. Brake drum and lining dimensions are as follows:

	T-30
Front drums, diameter	15 $\frac{13}{16}$ in.
Rear drums, diameter	16 $\frac{1}{8}$ in.
Front lining, thickness	$\frac{1}{4}$ in.
Rear lining, thickness	$\frac{1}{4}$ in.
Front lining, width	2 in.
Rear lining, width	2 $\frac{1}{2}$ in.
	T-42
Front drums, diameter	15 $\frac{13}{16}$ in.
Rear drums, diameter	17 $\frac{1}{4}$ in.
Front lining, thickness	$\frac{1}{4}$ in.
Rear lining, thickness	$\frac{1}{4}$ in.
Front lining, width	2 in.

	T-60-80
Rear lining, width	3 in.
Front drums, diameter	16 $\frac{1}{8}$ in.
Rear drums, diameter	17 $\frac{1}{8}$ in.
Front lining, thickness	$\frac{1}{4}$ in.
Rear lining, thickness	5/16 in.
Front lining, width	2 $\frac{1}{2}$ in.
Rear lining, width	4 in.

Frame design is very similar to that of the former models. Side channels are tapered both fore and aft with the following dimensions: T-30, depth 6 in., flange $2\frac{1}{2}$ in.; T-42, depth $6\frac{1}{2}$ in., flange 3 in.; T-60-80, depth 8 in., flange $3\frac{1}{2}$ in. The thickness is $\frac{1}{4}$ in. for all.

All frames are cold riveted. Noteworthy of mention is the extremely heavy girder type arched cross-member at the center of the T-30 and 42 frames. This member is directly opposite the 1 in. pin mounting for the front end of the rear springs which now take the drive on these two models. A feature of the springs on the T-30 and 42 are the double-wrapped spring eyes at the front end. Spring dimensions are as follows: T-30-42, 38 x $2\frac{1}{2}$ in. and 50 x 3 in. front and rear; T-60-80, 40 x 3 in. and 54 x 3 in.

Steering gears on all models are of the worm and split nut type with radius reductions of 15.2 to 1 for the T-30, 16.1 to 1 for the T-42, and 17 to 1 for the T-60 and 80. Tie-rods have spring loaded ball and socket ends for automatic adjustment to keep them tight

at all times. Tire equipment on all models is as follows:

	Front	Rear
T-30	6.00/20 Balloon	34 x 7 Pneumatic
T-42	7.00/20 Balloon	36 x 8 Pneumatic
T-60	36 x 5 Solid or 36 x 8 Pneumatic	36 x 10 Solid or 34 x 7 Dual Pneu.
T-80	36 x 5 Solid or 36 x 8 Pneumatic	36 x 12 Solid or 36 x 8 Dual Pneu.

Standard wheel equipment is hollow spoke cast-steel with integral hub and 20 in. rims. Motor Wheel "Spoksteel" wheels, demountable at the hub for both 20 in. and 23 in. rims, both single and dual, are available at extra cost.

Graham Brothers

NEW editions of its motor coaches are announced by the Graham Brothers division of the Chrysler Corp. Manufactured as formerly in three models, a street car type seating 21, a parlor coach seating 16 and a club coach seating 12, they embody a number of improvements in performance, comfort and operating safety.

As with the last series they are fitted with a six-cylinder engine developed from that used in the Dodge Senior Six. In addition they are now fitted with the four-speed transmission used in the 2½-ton Graham Brothers truck.

Internal Lockheed hydraulic brakes with 16 in. drums have been adopted, supplemented by a hand brake operating on the propeller shaft. Inside dimensions of the bodies have been increased somewhat, but rather than use this for additional seating capacity, it has been used for giving the passengers more room, including the adoption of longitudinal instead of cross seats over the wheel housing in the street car type.

The engine has a bore and stroke of 3½ by 4½ in., giving it an N.A.C.C.



Three and half-ton Schacht with specially mounted Barber-Greene trench digger

rating of 27.34 hp. It actually develops about 55-60 hp. Seven bearing 2% in. crankshaft, chrome vanadium steel connecting rods, invar strut aluminum alloy pistons with floating pins, crankcase ventilating system, and water manifold built integral with the water jacket cover are features of this engine.

Manually controlled shutters are fitted to the radiator, in addition to the circulation controlling thermostat located in the cylinder head. Among other engine accessories are an oil filter and gasoline strainer. A single plate 11 in. clutch is used, and the four-speed transmission with all shafts on anti-friction bearings is in unit with the engine.

Some of the features of the new bodies include more attractive appointments, a new non-skid mat over the hardwood flooring of the street car type, leather upholstery, adjustable driver's seat, and recessed seats for increased knee-room. Dash equipment includes a fuel gage and engine thermometer in addition to the usual instruments. Windshields are of one-piece type, swinging on the street car coach, and fixed on the others, ventilation on these being obtained from V-shaped glass ventilating wings hinged at their rear edges.

Illumination is by means of six flush type 21 cp. lamps. Current is obtained from a 225 watt motor driven generator and a 215 amp. hr. storage battery, the generator of course being furnished with a voltage regulator. Exterior hardware such as radiator shell, lamps, front bumper and radiator cap is nickel plated. Following are the major dimensions: The 21-passenger model has an overall length of 261 in.; overall height, 105 in.; overall

width, 86 in.; height of step, 16 in.; inside height, 74 in.; and aisle width, 18½ in. The 16-passenger unit is 256 in. long; overall height, 99 in.; overall width, 77 in.; height of step, 17 in.; inside height, 60 in.; and aisle width, 12 in. Dimensions of the 12-passenger unit are similar to those of the 16-passenger model with the exception of aisle width, which is 16 in. instead of 12.

Three-Ton Truck

With the introduction of a new three-ton, six-cylinder model, equipped with Lockheed internal four-wheel brakes and offered in three wheelbases, Graham Brothers have entered the heavy duty field. Prices, without cab, range from \$1,745 to \$1,845, according to wheelbase. Tire equipment consists of 32 x 6 in. pneumatics all around, duals at rear.

Following previous Graham Brothers practice of standardization a number of the units are interchangeable with the 2½-ton truck, including the engine, clutch and transmission. The capacity of these units was increased over the two model when the 2½-ton model was announced. This increase was in anticipation of the announcement of the 3-ton model.

Following are major characteristics of the new truck models:

W.B.	Designed for	Price	Body length
35	Dump & tractor	\$1,745	2½ yd. dump
165	General haul	1,775	12 ft.
185	Fur. Vans, etc.	1,845	15 ft.

Body allowance	Chassis weight
2000 lbs.	4224 lbs.
1700	4520
....	4540

Front axles, springs, steering gear and brakes are new. The spiral bevel rear axle is of identical design with that in the 2½-ton truck but considerably heavier. Standard reduction is 7½ to one. Pinions are straddle mounted on three ball bearings. An electric steel casting is used for the housing. Steering gears are of Hannum manufacture and of the nut and lever type. The screw shaft is mounted both top



Three-ton, six-cylinder Graham Brothers Heavy Duty Model

and bottom on ball bearings. Tie rods are of the ball and spring socket type.

Frames on the two shorter wheelbase models, 135 in. and 165 in. respectively, are very similar to those of the 2-ton truck. On the long wheelbase, 185 in. edition of the new truck stock thickness is 1/16 in. heavier, or 3/4 in. Channel depth is also increased to 7 1/2 in. and flange width to 2 1/2 in. Frames have four cross-members aside from the front channel bumper which is virtually a cross-member, the rear engine supports and the tie rod between the rear spring rear shackles.

Springs are heavier both front and rear than on the 2-ton. Front springs are 39 in. long and 2 1/2 in. wide, and rear springs 56 in. long and 3 in. wide, the front spring eyes of the rear springs being of the double wrapped type, two leaves encircling the eye bolt.

Rear brakes use 3 1/2 in. lining as against 2 1/4 in. for the front. Molded lining and high carbon steel drums and one-piece malleable iron shoes are used. The drums are 16 in. in diameter.

Optional tire equipment at extra cost includes two combinations, 34 by 7 all around with duals at the rear and 34 by 7 front and 36 by 8 singles at the rear.

Hug

A NEW unit known as the Model 486 Tractor Chassis and rated at 3 tons capacity has been added to the line of The Hug Co., Highland, Ill. It was designed for use in connection with trailers up to 15,000 lb. capacity.

This new model is powered by a Buda DW6 six-cylinder engine from which power is carried through a five-speed forward and two-speed reverse transmission to a double-reduction rear axle. The frame is of special heat-treated pressed steel. The Hug Multi-Cushion Relax Spring Drive, which characterizes other Hug models, eliminates the use of torque arm drives and is claimed to cushion road shocks. Standard tire equipment consists of 34 x 7 in. pneumatics all around.

A special feature of the transmission is the provision of an overgear drive in the fifth speed forward, which makes possible a speed of 40 to 45 m.p.h. empty without injuring the engine.



New Three-ton Hug Tractor, Model 486. It is powered by a six-cylinder engine and equipped with five-speed transmission

Pickwick

AN all-metal compartment sleeping car with accommodations for 26 passengers, known as the Nitecoach, was recently added to the system of the Pickwick Corp. of Los Angeles, Cal.

The coach has no chassis, the frame and body being built as a unit. It is 34 ft. 4 in. long, 10 ft. 3 in. high, 8 ft. wide and weighs about 14,000 lb. Use of duralumin in construction of nearly every part of the body accounts for the light weight. The engine, of Pickwick design and construction, develops more than 110 hp. Differential, transmission and other important units are also products of the Pickwick organization. An interesting feature is the method of removing the engine for repair or replacement. A few bolts are loosened, oil, gas and electric lines disconnected, and the complete power-plant is moved forward and out of the frame.

Entrance into the coach is through an arched doorway near the front of the car, opening immediately on a compact kitchen, which is part of the regular equipment. This section opens into a high-roofed center aisle running the length of the coach, on either side of which are the 13 compartments of the upper and lower deck. The compartments are so interlocked as to make the height of the coach only a few inches higher than a single deck stage. The center aisle, 7 ft. high and 22 in. wide, is located halfway between the floors of the upper and lower decks.

Each compartment is a little state-

room with deep cushioned chairs facing each other and a wide three-paneled window extending its full length. Heavy sliding curtains give privacy to each compartment at night. Upper berths are made by swinging up the back of each seat, while lowers are formed by the lower portion of each seat. Each berth is 24 in. wide and 6 ft. 4 in. long. Adjoining the berths and in the same compartment is a 3 ft. x 18 in. dressing space providing full headroom. In each compartment are five lights, a Thermos jug, a wash basin, folding seat, mirror, two sliding drawers and space for two suitcases. Portholes supply ventilation to the lower berths.

The kitchen is equipped with range, percolator, toaster, ice-box, cooking utensils and tableware; the lavatory, located in the rear, is furnished with a flushing toilet, chemical tank, wash stand with running water and full length mirror.

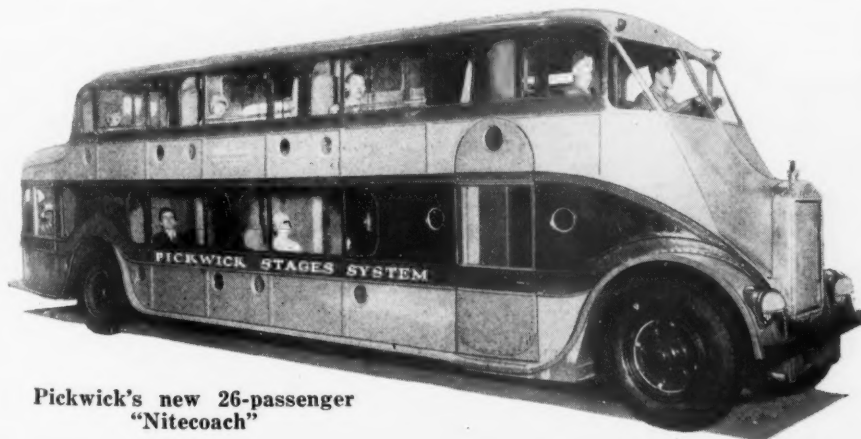
Schacht

WORKING in collaboration with O'Connell & Sweeney, general contractors of Cincinnati, chief engineers of the LeBlond-Schacht Truck Co. and the Barber-Greene Co. installed a Barber-Greene trench digger on a 3 1/2-ton Schacht truck. The outfit will be used to make all taps in Cincinnati streets for water connections. It can be transported rapidly from one job to another.

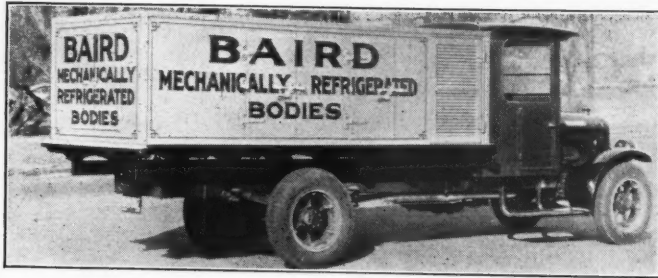
A special transmission with an exceptionally low gear reduction permits a minimum digging speed of 1 1/2 ft. per minute. A safety joint incorporated in the driveshaft will shear off if for any reason the vehicle becomes obstructed by an immovable object.

With this outfit only 1 1/2 minutes are required to dig a trench 4 ft. long, 4 ft. deep and 2 ft. wide. Road speed is approximately 18 m.p.h. The complete outfit is controlled from the seat by one operator. An auxiliary steering gear is also provided to control forward movement of the truck when digging.

The 172-in. wheelbase chassis while of 3 1/2 tons capacity is equipped with a 5-ton engine governed to 1000 r.p.m. at which speed it develops 60 hp. Tire equipment includes 36 x 8 in. pneumatic duals at the rear.



Pickwick's new 26-passenger "Nitecoach"



Designed for either mechanical refrigeration or ice

Refrigerator Bodies

William F. Baird Co.
Winchester, Mass.

SPECIALIZING in building refrigerator bodies for ice cream delivery this company offers five models of bodies the dimensions of which are varied to meet individual hauling requirements.

The metal ice cream compartment is refrigerated by direct contact on top and sides with melting ice and brine which is surrounded on the outside by corkboard insulation. Snug fitting hatch covers and doors forced against elastic gaskets conserve the cooling effect. All compartments are accessible from the curb; ice cream being removed by sliding the cans from a dry chamber and ice and salt for dealers being carried in a separate compartment reached from the side of the body.

Wood parts and insulation of Baird bodies are waterproofed by dipping and the ice cream compartment is made of galvanized metal with welded seams.

Bodies are available for trucks ranging in capacity from $\frac{3}{4}$ to 5 tons.

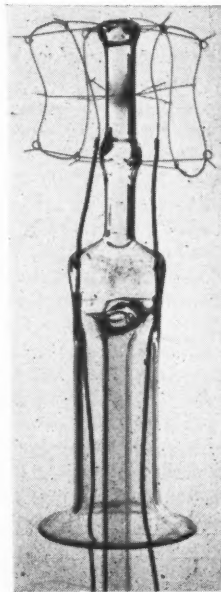
Heil Milk Tanks

The Heil Co.
Milwaukee, Wis.

HAIL milk tanks for mounting on trucks are not lined but are built of special cold rolled steel. Seams are butt-welded by the electric arc and all corners are rounded so there are no crevices in which sediment may collect. The inside surface is tinned by a special process which has taken years to develop. In addition to the tinned milk tank the same units are made of special stainless steel which will not rust, stain or tarnish. The tanks are built in round or elliptical shapes in any capacity.

Rough Service Lamp

National Lamp Works
Nela Park, Cleveland, Ohio



AN electric lamp designed to withstand rough service such as that of a portable lamp used by mechanics has been developed by the National Lamp Works of the General Electric Co. This lamp is a 50-watt A-19 inside frosted Mazda lamp selling at 37 cents.

The filament assembly and support is attached to the bulb by means of the flange at bottom

The new lamp will withstand an average of 15 to 25 drops of 3 ft., when enclosed in a regular wire service unit compared with one or two drops for the regular 50-watt Mazda C lamp, according to tests reported by the company.

The coil filament is wound on a much smaller mandrel than that of the regular 50-watt lamp. Because of the smaller coils the length of the filament is nearly three

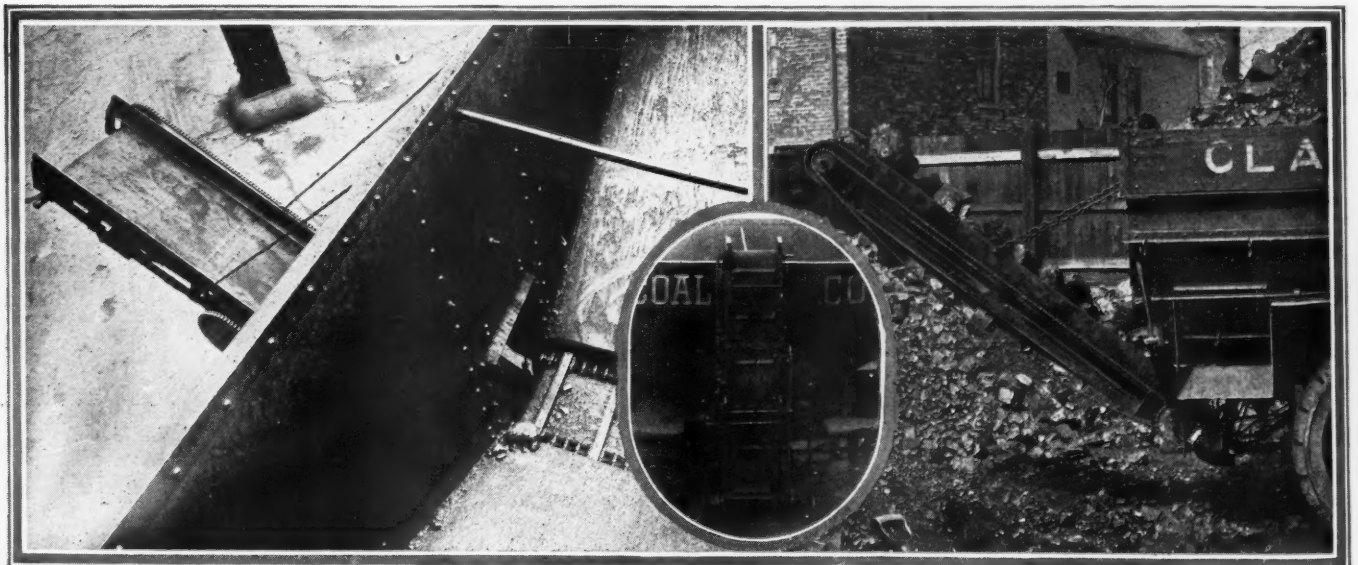
times that of the standard lamp. Instead of three supports found in Mazda type C lamps the heavy duty lamp has 16 supports. The lamp is further strengthened by the addition of a center row of supports which are closed about the filament tightly enough to prevent slipping, due to shocks or bumps received.

Conveyor Body for Trucks

Conveyor Body Co.
2339 W. 111th St., Chicago

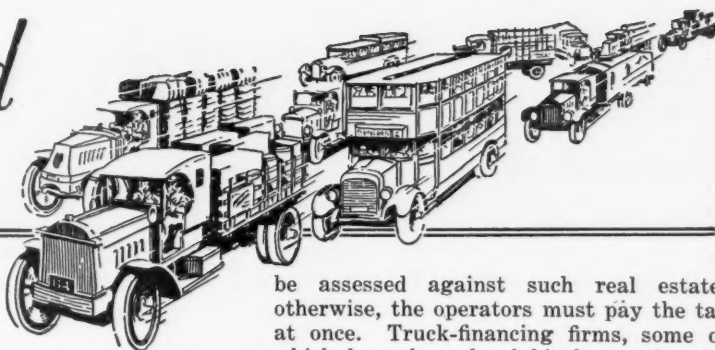
A CONVEYOR body for trucks, for use with sand, gravel or coal, has been developed by the above company. The body itself is of the hopper type and combines the functions of a conveyor and a dump truck without the lifting of the body by hydraulic or other mechanical means. The interior of the body slopes toward the center, causing the material in it to slide onto a chain conveyor, which carries it through the discharge gate either for dumping or to another conveyor on the outside of the body for elevating.

Capacity of one ton per minute is maintained by the conveyor which is built in varying lengths, and so set as to be adjustable to any angle up to 40 degrees. Power is taken from the transmission by shaft and thence by sprocket and chain to the main conveyor shaft. The load carrying belt on the conveyor also is operated by a chain. The conveyor angle is set by the operator by means of a hand-operated winch. Bodies at the present time are being constructed with capacities of 6 yards and sizes from 5 tons up will be available shortly, according to the plans of A. Kutscha, president of the company.



Three views of the Conveyor Body which combines the functions of a conveyor and a dump truck

Have You Heard That ~



SEVERAL changes and transfers in the sales organization of the Autocar Company has been announced by H. M. Cole, general sales manager. The changes affect factory branches of the Middle West principally. J. A. Morris, assistant sales manager, has been brought from Chicago, where he served as district manager of the Middle West, to the factory to take over dealer sales. Rodney Hallam has been appointed manager of the Middle Western district with headquarters in Chicago. W. J. Laughlin has been appointed manager of the Chicago branch and J. J. Laughlin manager at Detroit, succeeding P. H. Lichtenberg, resigned. Frank H. Pietsch has joined the organization at Chicago to take charge of national user accounts, succeeding in that work M. L. Foster, Jr., who will in the future devote his entire time to dealer work.

Clarence A. Triphagen has resigned as general sales manager of Reo Motor Car Co. Mr. Triphagen has been general sales manager of Reo for the past three years. Previous to his appointment he was in charge of the Detroit branch and before that had conducted a Reo agency in Lansing.

ANNUAL convention of the National Battery Manufacturers' Association will be held at the Ambassador Hotel, Atlantic City, September 20 and 21. A comprehensive business program including technical and general papers by prominent men in the industry are planned. An exhibit of materials used in the making of batteries will be a feature of the convention.

T. A. Willard has resigned as president of the Willard Storage Battery Co., and has been succeeded by R. C. Norberg. Mr. Norberg, who was associated with Mr. Willard for the past 25 years, previously was vice-president and general manager. Mr. Willard remains on the board of directors.

TRUCKS are being seized by the state of California, through Controller Ray L. Riley, for non-payment of the 4½ to 5 per cent receipts tax laid by the last legislature on public truck operators. Delinquencies since July 2, 1928, total more than \$750,000 and approximately 1000 trucks owned by more than 150 operators and individuals are involved. The state is ignoring the claims of dealers who have not been paid in full by the owners, taking the stand that a delinquent tax is a first lien on movable property. In cases where there are real properties, the truck tax will



Loading scene preliminary to the flight of 18 monoplanes with 10 tons of air mail from the Reo Motor Car Company to its distributors and dealers throughout the country. Reo trucks were used to deliver the sacks to the planes

be assessed against such real estate; otherwise, the operators must pay the tax at once. Truck-financing firms, some of which have been hard hit by truck seizures, are protesting Riley's action, but the attorney-general of the state declares the controller to be within his legal rights.

Roy T. Hurley has been appointed assistant to George H. Townsend, president of the Moto Meter Company, Inc., of Long Island City. Mr. Hurley will take charge of production and engineering. He was formerly chief ignition specialist of the company in charge of spark plug manufacture.

JULY deliveries of Brockway trucks were more than double those of the same month last year, according to M. A. O'Mara, president. Prospects are for continued good business, he said, the gains reflecting in part the acquisition of Indiana Truck Corp. in May.

Farm Income Increased One Per Cent in Present Year

FARM income gained one per cent in the present year, according to a statement by the Department of Agriculture. Gross income in the agricultural industry during the 1927-28 season is estimated at \$12,253,000,000 by the department as compared with \$12,127,000,000 during the previous season. The department estimates the farmer earned a return of about 3.4 per cent on his capital at market value.

MORE than 200 exhibit spaces, covering approximately 30,000 sq. ft. of floor space, have been reserved by the American Bottlers of Carbonated Beverages for the annual A.B.C.B. Exposition to be held in the Detroit Convention Hall, November 12 to 16.

J. N. Kirk, sales manager, World Bestos Corp., returning from a trip through the Southwest reports that general business conditions in that section seem to be much improved. Investigating legislative activity of the states visited regarding brake inspection, Mr. Kirk feels that there is a need for better legislation and more education. He believes that every state should standardize on brake and steering apparatus testing.

ONTARIO operators of motor transport lines will be required to pay a license fee of one-fifth of a cent per gross ton-mile, according to the provisions of the Public Commercial Vehicles Act, which was enacted by the province of Ontario, Canada, this year and which now becomes effective. Among the other regulations included in the act are: provision of \$3,500 insurance on merchandise entrusted the carriers; the carrying of a legal fire extinguisher by each vehicle; a maximum of 10 working hours in 24 for drivers; the reporting of all accidents resulting in loss of life or injury to persons or property to the highway department, and use of a uniform bill of lading.

REVISION of the warranty on pneumatic tires, amounting to a perpetual guarantee against defects, was announced by the recently organized Rubber Institute, representing forty-four tire manufacturers. The warranty reads as follows: "Every pneumatic tire of our manufacture bearing our name and serial number is warranted by us against defects in material and workmanship during the life of the tire, to the extent that if any tire fails because of such defect we will either repair the tire or make a reasonable allowance on the purchase of a new tire." General Lincoln C. Andrews, director-general of the institute, said that the purpose of this warranty is to provide for the handling of all claims on a basis of adjustment which will be fair to all consumers.

T. H. "Doc" Kinkade, expert and authority on air-cooled airplane engines, has become affiliated with the Lycoming Mfg. Co. Mr. Kinkade was formerly with the Wright Aeronautical Corp. and is well known for his work as engine instructor in United States Army and Navy training stations as well as engineer on many of the well-known recent flights.

UNDER the plans of the recent association of Pierce-Arrow Motor Car Co. and the Studebaker Corp. of America, Studebaker will invest \$2,000,000 in the new company, receiving in return all the class "B" stock. While the arrangement is not a merger, Studebaker's large selling and production facilities will back Pierce-Arrow. A. R. Erskine, president of Studebaker, is chairman of the board of the new company, and Myron E. Forbes remains president. One of the objectives of the arrangement will be to get production in the Pierce-Arrow plant up to 15,000 units a year. It is estimated that Pierce-Arrow may produce 20,000 units a year utilizing the same plant space and facilities it now has.

H. F. Harper, president, Motor Wheel Corp., in a recently issued statement said that the net earnings of the corporation, after taxes, for the seven months ended July 31, 1928, totaled \$1,643,602. This compares with \$1,142,516 for the first seven months of 1927 and \$1,542,834 for the entire fiscal year of 1927. Surplus as of July 31 is \$7,497,326.

TENTATIVE program of the Transportation Meeting of the Society of Automotive Engineers to be held at the Robert Treat Hotel, Newark, N. J., Oct. 17-19, promises to be replete with discussions on all phases of motor transportation. Six general sessions are being planned, namely: Bus transportation, store door delivery, design versus legislation in connection with the six-wheel vehicle, business of transportation, operation and maintenance, and service problems.

Roger Birdsell, sales manager, Perfex Corporation, builders of heavy-duty truck radiators, was elected to the directorate and made vice-president of the corporation at the last meeting of the directors.



Special hoist and body used by a Western concern for piling lumber. The body is tilted to permit easy discharge. Wood Hydraulic Hoist and Body Company of Seattle furnished the equipment

HOW to check accidents on the streets and highways will be one of the chief subjects to be considered at the 17th Annual Safety Congress to be held in New York City on October 1 to 5. More than 320 speakers will talk before 110 separate meetings. Public officials will give demonstrations of their methods of safeguarding the public and the latest mechanical safety devices will be on exhibit. Alfred H. Swayne, vice-president of General Motors and vice-president of the National Automobile Chamber of Commerce, is chairman of the New York Congress Committee.

H. H. Rice, assistant to the president of General Motors Corp., has been appointed a member of the new foreign commerce department advisory committee of the United States Chamber of Commerce.

World Economic Conditions Improve

ECONOMIC conditions throughout the world generally are sounder than they have been at any time since the war, according to J. D. Mooney, vice-president of General Motors Corp., in charge of overseas operations.

E. E. "Dave" Warfield, known for years in the automotive replacement field, has joined the Manhattan Rubber Mfg. Co., Passaic, N. J., in a merchandising capacity. Since 1908 Mr. Warfield has been affiliated in executive capacity with Wetmore-Savage Co., Gill Mfg. Co. and Protex-A-Motor Mfg. Co. His new duties will be connected with the merchandising of the Hycoc line of brake lining, fan belts, radiator hose, tubing, packing, etc.

GEORGE H. RALLS, president, Gabriel Snubber Manufacturing Company, made the announcement that his company would shortly begin production on a hydraulic shock absorber to be known as the Gabriel Triple-Hydraulic Shock Absorber. The plant of the Gabriel company is being retooled for the production of the new device, at a cost of \$350,000 and will be complete in October. Production of the Gabriel Snubbers will be continued at a rate of 8000 or more per day.

John Eckerle, president of Aluminum Industries, Inc., Cincinnati, is now in Europe making an intensified survey of automotive manufacture. He is also introducing Permite pistons. Mr. Eckerle states that aluminum pistons are as popular in foreign countries as they are in America. He will return in October.

CONTINUED progress in the negotiations for consolidation of the Motor and Accessory Manufacturers Association with headquarters in New York, and the Automotive Association, with headquarters in Chicago, was announced recently at the offices of the former organization. J. M. McComb, president of the M. & A. M. A., said that the special committee on the merger reported that many of the essential details have been agreed upon.

Durand Steel Locker Co. and Lyon Metallic Mfg. Co., Aurora, Ill., recently consolidated, forming one of the largest companies in the country devoted to the manufacture of steel lockers, shelving, general steel storage equipment and kindred products.

THE Studebaker Corp. of America reports total deliveries in July, 40 per cent ahead of July, 1927. This is the fifteenth consecutive month that Studebaker has reported an increase over the previous corresponding month.

Just *how* DIFFERENT *is* ROSS *from* Other Steering Gears ?



THE reason that Ross Cam and Lever Steering advantages cannot be duplicated by other types of steering gears, is that Ross advantages result from certain mechanical features not found in ordinary steering gears. Here they are:

- 1 VARIABLE RATIO**—The ratio of the Ross Cam and Lever Steering Gear can be varied at will. It can be made with a fixed ratio throughout, or it can be made fast in the middle and slow at the ends, or vice versa. It can be, and is, engineered to fit the characteristics of the vehicle on which it is to be used, for there is no mechanical restriction on the ratio. With Ross the ratio fits the job.
- 2 UNUSUAL LEVERAGE**—Everyone understands the power of leverage, and how it increases with the length of the lever. Because of its characteristic construction, the Ross Cam and Lever Steering Gear permits the use of a longer lever arm in a given size of housing, than any other gear.
- 3 LOW INTERNAL PRESSURES**—Here again the unusual leverage of Ross Cam and Lever Steering gear gives an advantage. Because of the longer lever, it requires less pressure at the end of the lever to obtain a given result, than in other types of gears.
- 4 LINE CONTACT OF ACTUATING AND ACTUATED MEMBERS**—A feature found only in the Ross Cam and Lever Steering Gear, which reduces frictional losses, and is largely responsible for the control of road shock.
- 5 BALL-BEARINGS FOR BOTH THRUST AND RADIAL LOADS**—By the use of ball bearings to take both thrust and radial loads—instead of only thrust loads as in the ordinary steering gear—Ross further reduces frictional losses.
- 6 HIGH OVERALL EFFICIENCY**—Because of its low internal pressures, line contact, and the utilization of ball-bearings for both thrust and radial loads, the overall efficiency of the Ross Cam and Lever Steering Gear is greater than in the ordinary steering gear. This means that less effort is required to operate the gear itself—that a greater percentage of the force exerted on the steering wheel is delivered to the real purpose of turning the front wheels. Hence, easier steering.

Every point of superiority in Ross Cam and Lever Steering is the result of definite mechanical advantages found only in this gear. We shall be glad to discuss Ross advantages more fully with you.

ROSS GEAR & TOOL COMPANY ❖ LAFAYETTE, INDIANA

ROSS *Cam AND Lever* STEERING

ORGANIZED by the German government after the war to utilize surplus army trucks, the Kraftverkehr Deutschland M.m.b.H., which is now operated by a private company, has become one of the largest organizations of its kind in the country. Originally established to engage in the transportation of freight and express goods, passenger-car business was taken on later. The enterprise is national in its scope, being divided into a number of branches, one in each state or province. The present status of the company is reflected by a recently published annual report. On December 31, 1927, the company operated a total of 425 routes of a total of 5500 miles. Of these 380 lines were passenger-carrying lines and 45 freight-carrying lines. During 1927 the companies carried 49,000,000 passengers for a total of 16,000,000 vehicle-miles. Freight services amounted to 6,200,000 truck-miles, as compared with 4,500,000 in 1926.

George A. Brockway, chairman of the board of directors of the Brockway Motor Truck Corp., sailed for Europe late in August for an extended pleasure trip abroad. Mr. Brockway expects to return to Cortland in October.

WORLD BESTOS CORP. reports that business has been good during present year and that Grafil brake lining sales for the first six months of 1928 were 300 per cent greater than the corresponding period last year. Distribution has been established in every state in the Union.

American-La France & Foamite Corp. reports net loss for the first half of 1928 as \$180,900 for commercial truck operations. Other departments showed a net profit of \$319,999.

JULY contracts east of the Rocky Mountains reached a total of \$583,432,400, or nine per cent ahead of the total for the same month last year, but a drop of 10 per cent from the total for June of this year. Total contracts since the first of the year amounted to \$4,028,299,900, which represents an increase of eight per cent over the same period in 1927.

Patrick Harper, Sacramento branch manager for the Reo Motor Car Company, has been appointed manager of the Speedwagon sales division of the Reo Motor Car Company of California, with headquarters in San Francisco.

A GIANT automobile ship with wheel diameters as high as the average city house and with a 5000 to 7250-mile cruising radius has been designed for desert travel by a German engineer, according to a report received by the Department of Commerce. Its dimensions are said to be 125 ft. long, 25 ft. wide and 45 ft. high, mounted on wheels 39 ft. in diameter.

It will be shaped like a ship and will require no roadway or rails to travel on. Intended for desert travel this vehicle will be capable of climbing 30 per cent grades and compensating devices will keep the mammoth body at a convenient angle allowing the wheels at all times to con-

tact the ground. Speed will be approximately 16 m.p.h.

Two 450-hp. Diesel engines, one for emergency, and two dynamos to supply light and electro-motor power will be used. Steering will be accomplished through a hydraulic device.

The report indicates that the new ship of the desert will have all the attributes of a ship of the sea, such as cranes for hoisting in supplies, four decks, wireless room, cabins, kitchen, dining room, reading room, promenade, etc. It is planned to have room for 250 persons—passengers and crew—and 200 tons of merchandise exclusive of water and fuel.

Tire & Tube Inventory

THE semi-annual survey of dealers' stock of automobile tires and tubes by the Rubber Division of the Department of Commerce will commence during the last week of September when questionnaires will be mailed out to the trade. Inasmuch as this survey develops much valuable information regarding the state of dealers' tire inventories, the trade is urged to cooperate.

ACQUISITION of the O. Armleder Motor Truck Co. by The LeBlond-Schacht Truck Company on August 31, was announced by the latter company. Manufacture of Armleder trucks will be continued by a new corporation to be formed and operated as a division of the LeBlond-Schacht Truck Co. at its Cincinnati plant. Service and parts for all Armleder trucks now in use will be available from the same point. With the exception of Otto Armleder, retired, the entire Armleder personnel will be retained. By reason of the consolidation the LeBlond-Schacht line will consist of light and heavy duty vehicles in various price classes ranging from 1½ to 7½ tons.

Federal Motor Truck Co. reports net income for the first half of 1928 as \$214,203. This compares with \$447,556 for the year ended December 31, 1927.

ENGLISH trucks and buses are now allowed to travel at a maximum speed of 20 m.p.h., provided they are equipped with pneumatic tires. This regulation, effected by the Ministry of Transport, is an attempt to get rid of a farcical situation resulting from the former 12 m.p.h. limit, which, of course, was never observed. While the new legal limit was opposed as being too low, it is the maximum to which the ministry could raise it without further legislation. Operators proposed 30 m.p.h. for buses carrying 24 passengers.

The General sales and advertising offices of the Universal Crane Co., Cleveland, Ohio, has been moved to 28th and Fulton Sts., Lorain, Ohio.

Coming Events

SHOWS

American Electric Railway Association, Public Auditorium, ClevelandSept. 22-28
American Road Builders' Association, Inc., Cleveland Auditorium...Jan. 14-18
Automotive Equipment Association, Coliseum, ChicagoOct. 22-27
*Chicago, National, Coliseum, Jan. 26-Feb. 2
National Standard Parts Association, Cleveland Auditorium...Oct. 29-Nov. 3
*New York, National, Grand Central PalaceJan. 5-12
*Mid-West Motor Truck Transportation Congress, Manufacturers Bldg., IndianapolisOct. 23-26

*Will have Special Shop Equipment Exhibit.

CONVENTIONS

American Electric Railway Association, Public Auditorium, Cleveland, Sept. 22-28
American Road Builders' Association, Inc., Cleveland Auditorium...Jan. 14-18
Automotive Equipment Association, Coliseum, ChicagoOct. 22-27
Mid-West Transportation Congress, IndianapolisOct. 23-26
*Mid-West Motor Truck Transportation Congress, Manufacturers Bldg., IndianapolisOct. 23-26
National Highway Congress, Mexico CityOct. 3-6
National Battery Manufacturers Association, Ambassador Hotel, Atlantic CitySept. 20-21
National Standard Parts Association, Hollenden Hotel, Cleveland, Oct. 29-Nov. 3

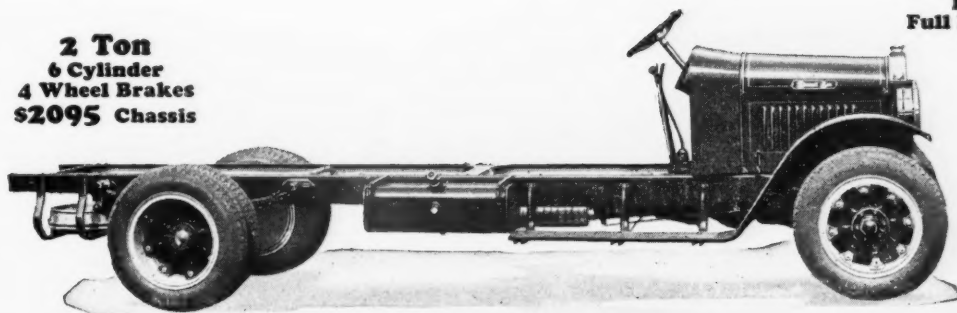
World Motor Transport Congress, RomeSept. 25-29

*Joint annual conventions of Motor Truck Association of Indiana, Ohio Association of Indiana, Ohio Association of Commercial Haulers and Motor Truck Club of Kentucky.

S. A. E.

Detroit, Jan. 15-18—Annual.
Newark, Robert Treat Hotel, Oct. 17-19—Transportation.
New York, Hotel Astor, Jan. 10—Annual Dinner.

**2 Ton
6 Cylinder
4 Wheel Brakes
\$2095 Chassis**



**Timken Worm Drive
Rear Axle
Full Floating Type**

The NEW STEWART 2 Ton Truck is far ahead of its field

A FAST, rugged truck, the Stewart 2 tonner is ideally suited for every transportation need. Smooth, quiet and economical in operation, comfortable and easy to steer.

Four wheel brakes, 6 cylinder motor, 4 speed transmission, Timken worm drive, full floating rear axle, speedometer, electric lights and starter, large side mounted gasoline tank with gage. Price includes painting. Beyond question "America's Greatest Truck Value."

Stewarts are famous for their ability to stay on the road and out of the repair shop; 8, 10 and 12 years of constant service are not unusual Stewart records. Regardless of price, you cannot buy a better truck.

Stewart Sales are Increasing

Stewart sales in 1926 were 41% ahead of 1925 and in 1927, 45.7% over 1926. Sales to date for 1928 are still farther in the lead. Learn why!

**STEWART MOTOR CORPORATION
BUFFALO, N. Y.**

Export Branch: 1 BROADWAY (Dept. 3) NEW YORK CITY, U. S. A.
All Codes Used

Models

6 Cylinder	3/4 Ton	\$895 Chassis
6 Cylinder	1 Ton	\$995 Chassis
4 or 6 Cylinder	1 1/4 Ton	\$1295 Chassis
4 or 6 Cylinder	1 1/2 Ton	\$1645 Chassis
4 or 6 Cylinder	2 Ton	\$1975 Chassis
6 Cylinder	2 1/2 Ton	\$2490 Chassis
6 Cylinder	3 Ton	\$3490 Chassis
6 Cylinder	4 Ton	\$4200 Chassis

All prices f.o.b. Buffalo

Factory built bodies of exceptional quality for every line of business

Stewart

MOTOR TRUCKS



**3 Ton
6 Cylinder
4 Wheel Brakes
\$3490 Chassis
Pneumatic Tires Extra**

Stewart Trucks have won—By costing less to run

Truck Sales Maintain Rapid Pace

(Continued from page 10)

of business done nationally, the showing made in Oregon, California, Arizona, Texas, Nebraska, Michigan, Kentucky, Maryland, Pennsylvania, New York, Connecticut and Rhode Island has been better than average. Results obtained in the Southeast and in some of the states bordering on the Mississippi have not been so satisfactory.

Heavy duty models have been enjoying a relatively active demand this year in comparison with last year. Production of models rated at 2 tons or more increased in the first seven months of this year to about 36,000 units from about 26,500 in the same period last year, a gain of approximately 35 per cent. Most of this gain was registered in capacity classifications ranging from 2 to 3½ tons inclusive. The 5-ton class also has shown a substantial gain over last year.

Apparently the industry is on the way to setting a new record for exports. In 1927 foreign sales reached an unprecedented total, but shipments abroad in the first seven months of 1928 are better than 10 per cent ahead of the same period last year, the respective totals being 71,747 in 1928 as against 63,954 in 1927.

The remaining months of the year should provide a satisfactory volume of business—probably somewhat better

than that enjoyed during the first eight months. The Presidential campaign is not having any noticeable effect on business. In fact, it appears that business is increasing its pace steadily as the year progresses and that election day is not going to interfere with this consistent forward movement.

Directed Selling Effort Gives Sales Leadership

(Continued from page 14)

company decided that the greatest truck market of the year would be in the building trade. Preliminary work with a body company resulted in a very efficient ready-mix concrete body, which was exploited to the limit. Resultantly, Reo speed wagons are used in the majority to haul concrete to a \$5,000,000 department store, being constructed to cover a square block in Seattle. Another 32-story office building is being supplied with concrete by Reo trucks, as well as the \$2,000,000 civic auditorium in the city. In this instance it was well worth while to give particular attention to a thriving field.

The last "why" back of the Lamping Motor Co. sales success lies in its used truck policy. "Many truck dealers consider that the used truck is strictly a thing of utility and appearance makes little difference in the reckoning," Mr. Folts emphasized. "This is true to a degree, but it must be remembered that

even the used truck buyer has a certain personal pride in his equipment and his buying desire leans toward the well-washed, 'dolloed-up' truck, the mechanical soundness being otherwise equal. We spruce up our used trucks to make them look well, as well as run well. It pays. I don't advise a duotone lacquer job for a used truck, but lots of water and a little paint goes a long way to move used trucks."

How to Service Timken Front End Bearings

(Continued from page 19)

Replace the wheel and put in the outer bearing. Tighten the adjusting nut while revolving the wheel until the wheel binds, then back off enough to allow the wheel to rotate freely. The adjustment may be tested by putting a short bar between the tire and the floor and feeling the cage of the bearing. The adjustment is locked by replacing the locking ring, locking washer and jam nut. The adjustment should be checked again before replacing hub cap because tightening the locking devices sometimes makes the bearing adjustment a little tighter.

Acknowledgment is made of the courtesy of the Timken-Detroit Axle Co. in furnishing drawings and service information used in connection with this article.

BUSES, accessories and equipment will be displayed at the Dallas state fair, October 6 to 22, according to an announcement made by the Texas Bus Owners Association. Arrangements for these displays have been made with the Dallas Automobile Trade Association. This will be the first time motor buses and equipment has been displayed at the state fair. The Dallas association also announced it would have the same exhibition at Waco during the Cotton Palace which follows the Dallas Fair. The association is also working on a program of construction which calls for terminal stations in Dallas and Austin and improvements on stations at other places in the state.

P. J. Kelly has been appointed advertising manager of the B. F. Goodrich Co., succeeding Gates Ferguson, resigned. Mr. Kelly was formerly advertising manager of Mason Tire & Rubber Co., and recently was assistant manager of Goodrich.

MORE than 15,000 persons disported themselves at the annual basket picnic and outing of the Pierce-Arrow Motor Car Co. employees at Erie Beach recently. Eight veteran employees were guests of honor, having completed their twenty-fifth year of continuous service with the company.

E. L. Ludvigsen has been appointed sales engineer for Fuller & Sons Mfg. Co. Mr. Ludvigsen was formerly connected with the White Motor Co., Cleveland.

IN an effort to make it easier for drivers of all motor vehicles to say "No" to "Thumb-Tourists" and discourage the dangerous hitch-hiking nuisance, Mack Trucks, Inc., has devised a clearly visible though inconspicuous, 4 x 3 in. sticker which states its message in concise yet courteous language. "Sorry! No 'Lifts.' Avoid Risk."

Mack Trucks, Inc., earned \$2,830,055 in the first half this year as against \$3,677,740 in the first half of 1927.

FWD truck sales for the first seven months of 1928 increased 24 per cent over the same period last year, according to an announcement by the Four Wheel Drive Autuo Company. FWD sales in 1926 showed an increase of 57.2 per cent over 1925, while sales in 1927 showed an increase of 45.5 per cent over 1926.

THE problem of interstate regulatory legislation will feature the annual board meeting of the Motor Bus Division of the American Automobile Association, which is scheduled at 10 a. m., Tuesday, Sept. 25, at the Winton Hotel, Cleveland. The meeting will be open to everybody directly or indirectly connected with the motor bus industry.

A complete chart, showing in detail the valve practices approved by the Tire and Rim Association of America, has been issued by the Dill Manufacturing Company of Cleveland.

ORDERS for 240 trucks, valued at \$1,175,000 have recently been closed by the American-La France & Foamite Corp. with different boroughs of New York City, according to Charles B. Rose, president of the corporation. The Borough of Manhattan has ordered 88 seven and a half ton trucks for the street cleaning department; the Borough of Queens has ordered 16 two and a half ton trucks and the Boroughs of Queens and Richmond together have ordered 15 seven and a half ton trucks. The city has ordered 15 75-ft. aerial trucks and six 700-gal. pumping engines.

July sales of the Seiberling Rubber Company, it is announced, exceeded \$2,000,000, an increase in dollars of 41 per cent over the sales in July of last year.

DODGE BROTHERS shipments of cars and trucks for the first seven months of this year from the plants in United States and Canada were 14.5 per cent above the corresponding period last year, while July shipments showed a gain of 23.7 per cent over July, 1927.

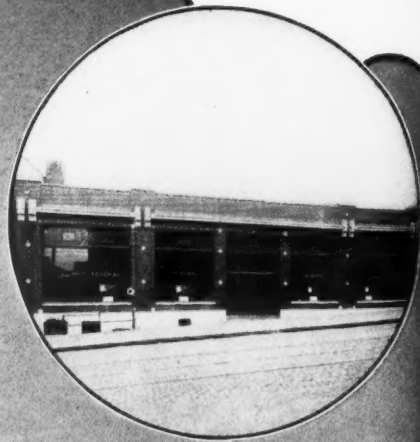
TIME-TESTED FOR PROFIT



**Count on 72%
Repeat Sales
If You Can Save**

it's a FEDERAL

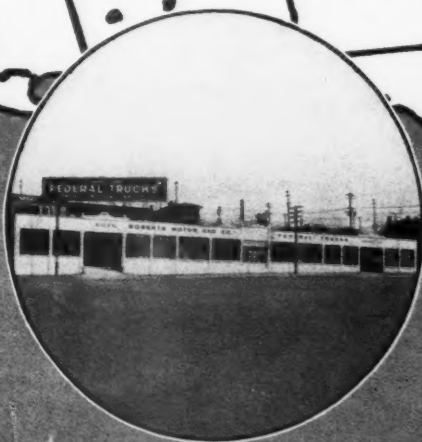
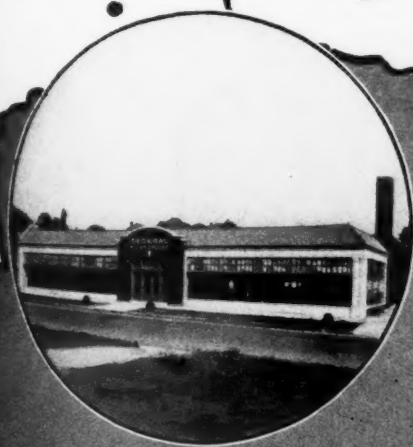
PROBABLY THE DEALER BODY *in the*



MOST PROSPEROUS ENTIRE TRUCK FIELD



FOR DEALERS AND OWNERS ALIKE





A Few

Travel Notes -

We from the home office invariably come back from a trip with a renewed feeling of pride. We are proud to be a part of the Federal Selling Organization.

Federal dealers are successful businessmen. Beautiful establishments house most of them. Well ordered, well managed -- and profitable -- service departments. The success of Federal dealers is reflected in the character of their establishments. Reflected, too, in the spirit of their selling organizations.

It is this spirit of which we are particularly proud for it is also a reflection of Federal policies. It is our belief that we owe it to our dealers to see to it that they are successful. Because of this belief no Federal dealer ever had a dollar's worth of stock "forced" upon him.

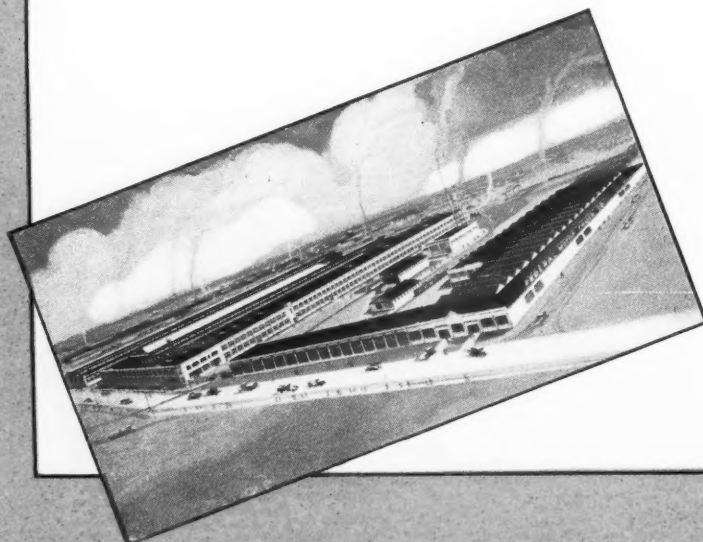
If a new dealer doesn't catch the spirit of our selling organization we don't feel that he has failed -- but we know that we have.

We are proud of the success of our dealers.

Yours truly,

President

The Federal
Motor Truck Company



FEDERAL TRUCKS

ALL SIZES—FOURS & SIXES

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

Those Chassis Which Are Sold and Recommended for Bus Use Are Designated in the Following Table by Reference Sign (S) in Front of the Name

For Motor Bus Chassis See Pages 48 and 49

* Corrections

† New Models

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Key of abbreviations, page 50

Trade Name and Model	General				Engine				Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase									
	Chassis Price	Maximum Wheelbase (Inches)	Tire Size		Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Ulling System	Governor (Make)		Radiator (Make)	Carburetor (Make)	Fuel Feed	Ignition System (Make)	Generator and Starter (Make)	Type and Make			Make and Model	Location	No. of Forward Speeds	Universals (Make)	Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
			Front (Inches)	Rear (Inches)																									
1000 Pounds																													
Chevrolet Nat. Com.	395 107	107	B 30x4 50	B 30x4 50	Ow	4-34x4 1/2	21.7 H	PC	PS	Non	Har	Car	V	D-R	D-R	P. Own	Ow Nat.	Ow	3	Ow	Ow	Ow Nat.	Ow	4.18	13.88 E	Ow Nat.	75 1/4	1695	
Durand Com. Ch.	495 107	107	B 28x4 75	B 28x4 75	Con	4-34x4 1/2	18.2 L	PC	PC	Non	Fed	Ste	V	D-R	D-R	P. Own	Ow	Ow	3	Ow	Ow	Ow	Ow	4.87	16.16 E	Ow	75 1/4	1650	
General Motors T-11	585 110	110	B 28x4 75	B 29x4 75	Con	4-34x4 1/2	18.2 L	PC	PC	Non	Fed	Ste	V	D-R	D-R	P. Own	Ow	Ow	3	Ow	Ow	Ow	Ow	4.18	13.92 E	Ow	74	1820	
Graham Brothers SE	665 110	110	B 28x5 00	B 29x5 00	Dodge	6-34x3 7/8	27.3 L	PC	PC	Non	McG	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.45	15.23 G	Do	74	1965	
Graham Brothers SEW	675 110	110	B 31x5 25	B 31x5 25	Dodge	6-34x3 7/8	27.3 L	PC	PC	Non	McG	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.73	16.16 G	Do	74	1965	
Reo Speed Wagon Jr.	805 115	115	B 28x5 25	B 28x5 25	Con 16E	6-28x4 1/2	18.2 L	PC	PC	Non	Har	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.7	14.63 E	Do	74	2280	
*Studebaker 52B	675 109	109	P 30x5	P 30x5	Con 9F	6-28x4 1/2	18.2 L	PC	PC	Non	Har	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	5.12	15.7 G	Do	74	1894	
1500 Pounds																													
Graham Brothers DE	775 120	120	B 31x5 25	B 31x5 25	Dodge	6-34x5 3/8	27.3 L	PC	PC	Non	Fed	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.73	16.16 G	Ow	75 1/4	2510	
Graham Brothers DEW	790 120	120	B 31x5 25	B 31x5 25	Dodge	6-34x5 3/8	27.3 L	PC	PC	Non	Fed	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.73	16.16 G	Ow	75 1/4	2510	
*Rush East Malt.	725 116	116	B 30x5 25	B 30x5 25	Wau XA	4-31x4 1/2	19.1 C	PC	PC	Non	McG	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.45	15.1 G	Do	74	2000	
Stewart Buick	805 118	118	B 30x5 25	B 30x5 25	Con	6-28x4 1/2	19.1 C	PC	PC	Non	McG	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.45	15.1 G	Do	74	2000	
*Studebaker GD-N	1075 140	140	B 30x5 25	B 30x5 25	Ow	6-34x5 3/8	27.3 L	PC	PC	Non	Har	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.8	13.7 F	Ow	77 1/2	2350	
Velle	1165 112	112	B 30x5 25	B 30x5 25	Ow	6-34x5 3/8	27.3 L	PC	PC	Non	Har	Ste	V	N-E	N-E	P. B&B	Do	Jac	3	Ow	Ow	Ow	Ow	4.9	13.7 F	Ow	54	2352	
1 Ton																													
Acme 14	120	120	P 30x5	P 30x5	Con H8	4-34x5 3/8	18.2 L	PC	PC	Non	Per	Til	V	A-L	A-L	P. B&B	M.M.	Sal	3	M.M.	Sal	SK267	Ros	6.1	18.73 B	Sal	90	2000	
Acme 16	133	133	B 32x6 00	B 32x6 00	Con 15C	6-34x5 3/8	27.3 L	PC	PC	Non	Chi	Zen	V	A-L	A-L	P. B&B	M.M.	Sal	3	M.M.	Sal	SK267	Ros	6.1	18.73 B	Sal	90	2100	
Acorn 20P	1185 137	137	P 30x5	P 30x5	Con 8R	6-34x5 3/8	27.3 L	PC	PC	Non	Ow	Zen	V	A-L	A-L	P. B&B	M.M.	Sal	3	Spi	Cl	SK267	Lay	5.5	27 A	Ow	92	3500	
Biederman	495 124	124	P 30x5	P 30x5	Ow Cap	4-31x4 1/2	17.7 H	PC	PS	Non	Har	Car	V	D-R	D-R	P. Own	Ow	Ow	3	Ow	Ow	Ow	Ow	5.43	33.47 A	Ow	82 1/2	3500	
Chevrolet Cap.	121 1/2	121 1/2	P 32x6	P 32x6	Wau XA	4-31x4 1/2	17.7 H	PC	PS	Non	Har	Car	V	D-R	D-R	P. Own	Ow	Ow	3	Pet	Tim	11600	Ow	5.71	19.07 A	Tim	48	2170	
Clydesdale 16	140	140	P 34x5	P 34x5	Con S4	4-41x4 1/2	25.5 L	PC	PC	Non	Har	Car	V	D-R	D-R	P. Own	Ow	Ow	3	Pet	Tim	1250	Ow	6.43	30.56 A	Tim	47 1/2	3450	
Commerce 8A	130	130	P 30x5	P 30x5	Con 11U	4-34x5 3/8	22.5 L	PC	PC	Non	Lon	Zen	V	D-R	D-R	P. Own	Ow	Ow	3	Rlo	Cl	310	Ow	5.66	20.5 A	Shu	305	2900	
Commerce 20Z	136	136	P 30x5	P 30x5	Bud H56	6-34x5 3/8	27.3 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Concord K	1750 130	130	P 30x5	P 30x5	Bud WTU	6-34x5 3/8	22.5 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Day-Elder M.	1345 131	131	P 30x5	P 30x5	Con 16C	4-34x5 3/8	22.5 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Denby 41	128	128	P 34x5	P 34x5	Her OX	4-4x5	25.6 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Diamond T76	130	130	P 30x5	P 30x5	Con 18E	4-4x5	25.6 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Diamond T150	127 1/2	127 1/2	P 30x5	P 30x5	Con 18E	4-4x5	25.6 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Earle 10	130	130	P 30x5	P 30x5	Lye CT	4-27x4 1/2	19.8 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Pet	Tim	12307	Ow	5.12	18.8 A	Ow	61	3000
Federal F6	124	124	P 30x5	P 30x5	Con 34L	4-27x4 1/2	19.8 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Pet	Tim	12307	Ow	5.12	18.8 A	Ow	61	3000
Federal Scout	124	124	P 30x5	P 30x5	Wau X	4-32x4 1/2	19.8 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Pet	Tim	12307	Ow	5.12	18.8 A	Ow	61	3000
Fisher Jr. Express	140	140	P 30x5	P 30x5	Con 31L	4-32x4 1/2	19.8 L	PC	PC	Non	Per	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Blo	Sal	F	Ow	5.85	22.3 A	Sal	91	2500
Garford 20Z	745 126 1/2	126 1/2	P 30x5	P 30x5	Bud H56	6-34x5 3/8	27.3 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Blo	Sal	F	Ow	5.85	22.3 A	Sal	91	2500
General Motors T-10	1095 132	132	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
General Motors T-20	1095 133	133	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
*Graham Brothers 10	1485 130	130	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Graham Brothers 10	129	129	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Hahn S4	137	137	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Hahn S4	137	137	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Indiana 200	137	137	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Int. Harv'r 6 Sp. Spec.	134	134	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
King Zentler 22A	140	140	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Kissel	140	140	P 30x5	P 30x5	Con 15C	4-34x5 3/8	18.2 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Knickerbocker	1450 140	140	P 30x5	P 30x5	Con 12C	4-34x5 3/8	27.3 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Larabee A3	133	133	P 30x5	P 30x5	Con 12C	4-34x5 3/8	27.3 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
*Luedinghaus	130	130	P 30x5	P 30x5	Con 12C	4-34x5 3/8	27.3 L	PC	PC	Non	Lon	Zen	V	A-L	A-L	P. B&B	Mun T25N	Ow	Ow	3	Spi	Col	5307	Ow	5.1	20.4 A	Col	20	3400
Reo DA	995 123	123	P 30x5	P 30x5	Con 16E	4-34x5 3/8	27.3 L	PC	PC	Non	Har	Ste	V	N-E	N-E	P. B&B	Mun T25N	Ow	Ow	3	Pet	Tim	12307	Ow	5.22	18.47 E	Tim	44 1/2	2755

Key of abbreviations, page 50

Trade Name and Model	General			Engine						Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase		
	Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase (inches)	Tire Size		Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Cylinder System	Governor (Make)		Radiator (Make)	Fuel System		Ignition System (Make)	Generator and Starter (Make)	Type			Total Reduction in High	Total Reduction in Low	Brakes, Location
				Front (inches)	Rear (inches)							Carburetor (Make)		Fuel Feed									
1 Ton—Cont'd																							
Reo DC.....	1075	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Rugby Exp.....	975	128	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Sandow G.....	120	120	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Sandow GA.....	120	120	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Selden 17.....	142	142	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Service 20Z.....	128	128	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Stewart Buddy.....	998	128	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
United 16.....	122 1/2	122 1/2	P 32x4 1/2	P 32x4 1/2	Con 20L	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
U.S. S. U.....	1850	135	P 34x5	P 34x5	Con 20L	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Wachsmuth S.....	152	152	P 34x5	P 34x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
White 15B.....	154 1/2	133 1/2	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/4	PC	Non	Har	Sch	V	N-E	N-E	P. B&B	W-G	U	U	U	U	U	U
Willis Knight T-100.....	130	130	P 30x5	P 30x5	Own GKA	6-2 1/2x3 3/4	FL	20 7/8	FL	Non	Own	Own	U	A-L	A-L	P. B&B	W-G	U	U	U	U	U	U
1 1/4 Ton																							
Atterbury 26B.....	132	132	P 30x5	P 30x5	Lye S	6-3 1/2x4 1/2	PC	25 3/8	PC	Non	Own	Own	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Biederman.....	154	154	P 32x6	P 32x6	Con 8R	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Own	Own	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Brookway Junior.....	130	130	P 30x5	P 30x5	Wis C	6-3 1/2x5	PC	22 5/8	PC	Non	3&O	3&O	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Brookway JF.....	137	Opt.	P 30x5	P 30x5	Wis C	6-3 1/2x5	PC	22 5/8	PC	Non	3&O	3&O	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Clinton 20B.....	153	153	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	22 5/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Clydesdale 10A.....	154	154	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	22 5/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Commerce 25Z.....	136	136	P 32x6	P 32x6	Con 8R	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Commer KX6.....	139	139	P 30x5	P 30x5	Con 8R	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Corbett 620.....	133	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Defiance F1.....	130	130	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Diamond 177.....	138 1/2	138 1/2	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Garford 25Z.....	136	136	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Godfredson B24.....	131	131	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers F.E.....	995	130	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1030	130	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1065	140	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1100	140	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133	P 30x5	P 30x5	Con 16E	6-3 1/2x4 1/2	PC	27 3/8	PC	Non	Non	Non	U	A-L	A-L	P. B&B	B-L	U	U	U	U	U	U
Graham Brothers BEA.....	1485	133																					

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Trade Name and Model	General			Engine						Electrical System		Clutch	Gearset			Rear Axle		Gear Ratios		Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase									
	Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase (inches)	Tire Size		Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Engine			Type and Make	Gearset		Make and Model	Type	Total Reduction in High	Total Reduction in Low												
				Bore and Stroke	Oiling System					Governor (Make)	Radiator (Make)			Carburetor (Make)	Fuel Feed							Ignition System (Make)	Generator and Starter (Make)	Location	No. of Forward Speeds	Universals (Make)					
2 1/2" Ton—Cont'd	Day-Edison 1	144	180	S 36x41	S 36x81	Bud KBU	4-4 1/2x4 1/2	25.8 I	PC	Bud	Bus	Zen	V	D-R	D-R*	Ful GUI2	U	4	Spi	Tim 65000D	Ful GUI2	W	9.25	44.4	A	Tim 15302	Ros	1751 1/2	1031 1/2	5700	
	Day-Edison 2	160	190	P 36x41	P 36x81	Con S4	4-4 1/2x4 1/2	27.3 I	PC	Non	Chi	Zen	V	A-L	A-L	Ful GUI2	U	4	Spi	Tim 64600	Ful GUI2	R	9.00	39.12	A	Tim 15200	Ros	142 1/2	911 1/2	5100	
	Day-Edison 3	160	190	P 36x41	P 36x81	Her K	4-4 1/2x4 1/2	27.3 I	PC	Non	Chi	Zen	V	A-L	A-L	Ful GUI2	U	4	Spi	Tim 65000	Ful GUI2	W	9.00	39.12	A	Tim 15200	Ros	142 1/2	911 1/2	5100	
	Day-Edison 4	160	190	P 36x41	P 36x81	Her K	4-4 1/2x4 1/2	27.3 I	PC	Pie	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 5	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 6	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 7	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 8	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 9	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 10	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
3 1/2" Ton—Cont'd	Day-Edison 11	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 12	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 13	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 14	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 15	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 16	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 17	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 18	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 19	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 20	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
4 1/2" Ton—Cont'd	Day-Edison 21	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 22	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 23	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 24	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 25	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 26	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 27	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 28	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 29	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 30	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
5 1/2" Ton—Cont'd	Day-Edison 31	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 32	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 33	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 34	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 35	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 36	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 37	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 38	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 39	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 40	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
6 1/2" Ton—Cont'd	Day-Edison 41	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 42	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 43	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 44	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4	41.2	A*	Tim 15300	Ros	167 1/2	901 1/2	4900
	Day-Edison 45	160	190	P 36x41	P 36x81	Her YXB	4-4 1/2x4 1/2	27.3 I	PC	K.P.	G&O	Zen	G	Apo	A-L	D. Cov	B-L 55	A	4	Spi	Tim 65000D	D. Cov	L	5.4							

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Key of abbreviations, page 50

Trade Name and Model	General				Engine				Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase		Chassis Weight (lbs.)										
	Standard Wheelbase (inches)	Maximum Wheelbase (inches)	Tire Size		Make and Model	Number of Cylinders	Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System		Governor (Make)	Radiator (Make)	Fuel System		Ignition System (Make)	Generator and Starter (Make)			Type and Make	Make and Model		Location	No. of Forward Speeds	Universals (Make)	Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location	
			Front (inches)	Rear (inches)										Carburetor (Make)	Fuel Feed																	
3 Ton—Cont'd																																
Indiana 127A	141	141	P 32x6	Her K	4-41x5 3/4	28.9 L	PC	PC	Pie	Lon	Str	V	Eis	A-L	P. B&B	B-L 51	U	5	Spi	Cla 720	S	7.00	41.72	Shu 5550	Ros	87	56 1/2	5300				
Indiana 627A	147	147	P 32x6	Wis H	4-41x5	38.4 I	SP	PC	K.P.	Lon	Str	G	D-R	P. B&B	B-L 51	U	4	Spi	Own 63	Own 63	Own 63	Own 63	Own 63	Own 63	Own 63	Own 63	Own 63	Own 63	5600			
Int. Harvester 63	185	185	P 32x6	Bud EBU	4-41x5 1/2	38.4 I	SP	PC	Bud	Per	Zen	G	D-R	D. B-L	B-L 51	U	4	Spi	Cla B720	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	Tim 15302	6300		
Kenworth J	212	212	P 32x6	Bud DW6	4-41x5 1/2	38.4 I	SP	PC	Pha	Chi	Str	G	D-R	D. B-L	B-L 51	U	4	Blo	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	6200			
King Zeiler 60	3450	3450	P 32x6	Con K4	4-41x5 1/2	38.4 I	SP	PC	Han	Chi	Str	G	D-R	D. B-L	B-L 55	U	4	Blo	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	Tim 65700SP	6200			
King Zeiler 62A	192 1/2	192 1/2	P 34x7	Con 6B	4-41x5 1/2	38.4 I	SP	PC	Con	Chi	Str	G	D-R	D. B-L	B-L 55	U	4	Sui	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	Tim 65600	6200			
Kleber	4000	4000	P 32x6	Con L4	4-41x5 1/2	38.4 I	SP	PC	Non	R-T	Str	V	Bes-R	Bes-A	B-L 60	U	4	Sui	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Kleber Speed	4100	4100	P 32x6	Bud BUS	4-41x5 1/2	38.4 I	SP	PC	Non	R-T	Str	V	Bes-R	Bes-A	B-L 60	U	4	Sui	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Kleber Spec.	4350	4350	P 32x6	S 36x12	4-41x5 1/2	38.4 I	SP	PC	Non	R-T	Str	V	Bes-R	Bes-A	B-L 60	U	4	Sui	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Lange E3	3850	3850	P 32x6	Her XHC	4-41x5 1/2	38.4 I	SP	PC	Non	Non	Str	V	Bes-R	Bes-A	B-L 51	U	4	Pet	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Lange M	140	145	P 32x6	Her XHC	4-41x5 1/2	38.4 I	SP	PC	Non	Non	Str	V	Bes-R	Bes-A	B-L 51	U	4	Pet	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Lange H-1	150	145	P 32x6	Her XHC	4-41x5 1/2	38.4 I	SP	PC	Non	Non	Str	V	Bes-R	Bes-A	B-L 51	U	4	Pet	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Larabee XH25	173	194 1/2	P 32x6	Con 6B	4-41x5 1/2	38.4 I	SP	PC	Opt	Fel	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1	4-41x5 1/2	38.4 I	SP	PC	Pie	Own	Zen	G	D-R	D. B-L	B-L 55	U	4	Spi	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	Tim 65700D	6200			
Mack 66	177	220	P 32x6	Bud YBU1																												

[illegible]

Trade Name and Model	General			Engine				Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase					
	Chassis Price	Standard Wheelbase (Inches)	Maximum Wheelbase (Inches)	Bore and Stroke	N.A.C.C. Rated H.P.	Engine		Ignition System	Generator and Starter (Make)		Type and Make	Make and Model	Location	No. of Forward Speeds	Universals (Make)	Make and Model			Type	Total Reduction in High	Total Reduction in Low	Brakes, Location	Cab to rear of frame	Chassis Weight (lbs.) (stripped)
						Valve Arrangement	Governing System																	
4 Ton—WC'd																								
Pierce Arrow WC'd Relhenger C. Relay 80C Safeway 3 Wheeler Sanford 333. Selden 67. Selden 4X. Service 80Z. Sterling DC21-44. Stewart 22. United 40. U. S. 40. Ward La France 4D Ward La France 4D6 Wright-Will A.	5100	162	180	3 36x5.5	32 4 L	FP	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own		
	175	174	192	S 36x6	32 4 L	FP	K.P.	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus		
	175	174	192	P 36x6	32 4 L	PC	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	190	188	190	P 36x6	32 4 L	PC	Pie	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O		
	141	165	130	P 34x7	33 7	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	165	130	130	P 34x7	33 7	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	165	130	130	P 34x7	33 7	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	175	174	192	S 36x6	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	160	165	220	S 36x5	30 6 L	PC	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	4200	165	220	S 36x5	30 6 L	PC	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
	124 1/2	185	185	P 36x7	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	
	4050	165	185	P 36x7	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	
3465	145	172	S 36x5	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
4400	172	192	S 36x5	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
4400	172	192	S 36x5	32 4 L	FP	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non	Non		
4 1/2 Ton																								
Acme 90L Republic 30. Republic 30W. 5 Ton	4800	160	180	S 36x6	32 4 L	PC	McG	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi		
	5500	174	204	S 36x6	36 1 L	PS	Pie	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus		
	120	198	200	S 36x6	32 4 L	SP	Pha	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O	G&O		
	180	200	200	S 36x6	32 4 L	FP	K.P.	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus		
	175	205 1/2	205 1/2	S 36x6	40 0 L	FP	K.P.	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus		
	178	205 1/2	205 1/2	S 36x6	40 0 L	FP	K.P.	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus	Bus		
	187 1/2	220 1/2	220 1/2	S 36x6	40 0 L	PC	Wau	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi	Chi		
	183	220 1/2	220 1/2	S 36x6	4																			

4 1/2 Ton

10

Gasoline Tractor-Trucks

Motor Bus Chassis Specifications

MAKE AND MODEL	SEATING CAPACITY	CHASSIS ONLY	CHASSIS WITH BODY	RECOMMENDED BODY ALLOWANCE	WHEELBASE	MAKE AND MODEL	NUMBER OF CYLINDERS	ENGINE	RADIATOR MAKE	CARBURETOR MAKE	ELECTRICAL SYSTEM	Normal Speed	CLUTCH	GEARSET	TRANSMISSION	REAR AXLE	FRONT AXLE	STEERING GEAR	TIRES AND WHEELS	TURNS AND WHEELS	TURNING RADIUS (FT.)	FLOOR HEIGHT	LENGTH	WIDTH
Diamond T K2T	1187 1/2					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Diamond T S2T	145					DS40x7	Her K4	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Federal LD	121					DS36x5	Con K4	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
General Motors K-10T	111 1/4					DS36x5	G.M.C. 80	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
General Motors K-15T	111 1/4					DS36x5	G.M.C. 80	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Gramm 35-6 ton.	111 1/4					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Gramm 45-10 ton.	111 1/4					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Gramm 45-10 ton.	111 1/4					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Gramm 60-15 ton.	111 1/4					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Harvey W.T. 10 ton.	111 1/4					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Int. Harvester 43	115					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Int. Harvester 103	120					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Int. Harvester 54C	122					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Int. Harvester 74C	137					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Mack AB 5-6 Ton.	3400					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Mack AC 7-10 Ton.	4950					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Mack AC 11-14 Ton.	5500					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Pierce-Arrow XB	3750					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Pierce-Arrow RD	5400					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Pierce-Arrow RF	5000					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Saurer 5 Ton.	6000					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Schacht 7 Ton.	130					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Schacht 13 Ton.	130					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Walter FA	118					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Walter FA	136					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
Walter FA	172					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
White 52T	129 1/2					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4
White 51A	134					DS36x5	Her L	4-41x53 1/2	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 3204	Ros	P 38x7	25	31 1/2	203	67 1/4

Key of abbreviations, page 50

MAKE AND MODEL	GENERAL				ENGINE		ELECTRICAL SYSTEM				Normal Speed	TRANSMISSION		REAR AXLE		FRONT AXLE	TIRES AND WHEELS		Turning Radius (Ft.)		DIMENSIONS (In.)									
	WEIGHT		Number of Cylinders, Bore and Stroke	Radiator Make	Carburetor Make	BATTERY		Ignition System Make	Generator and Starter Make	Voltage and Amp. Hr. Cap.		CLUTCH	GEARSET	Make and Model	Type and Make		Universal Make	Make and Model	Final Drive	Brake Location	Make and Model	Steering Gear	Front	Rear	Wheels—Make	Floor Height	Length	Width		
	Seating Capacity	Chassis Only				Chassis with Body	Recommended Body Allowance																						Wheelbase	Make and Model
ACF 508	30				230	Ha S	6-41x5½	Zen	Zen	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 54030	S	G*	Col 3204	Ros	P 32x6	25	31½	203	67½		
ACF 519 (gas, elec.)	60				230	Ha S	6-41x5½	Zen	Zen	Zen	D-R	Opt	12-180	D-B-L	B-L 55	4	Spi	Tim	Col 54030	S	G*	Col 5403	Ros	P 32x6	25	31½	203	67½		
ACF 601	23				198	Ha S	6-38x5	Zen	Zen	Zen	D-R	Opt	12-115	D-B-L	B-L 55	4	Spi	Tim	Col 54030	S	G*	Col 5403	Ros	P 34x7½	21¼	259	83¼			
Acme 116	18	4910	8460		180	Con 6B	6-38x5	Per	Zen	Zen	Eis	Wil	6-153	D-B-L	B-L 51	4	Blo	Wis	67410	R	A*	Shu	Ros	P 32x6	21¼	259	83¼			
Acme 112	22	5110	9280		205	Con 7T	6-41x5½	Per	Str	Str	Eis	Wil	6-153	D-B-L	B-L 55	4	Blo	Wis	67410	R	A*	Shu	Ros	P 36x6	21¼	276				
Brookway JB	16	3200	4700	1500	142	Wis C	4-38x5	G&O	Zen	Zen	A-L	Exi	6-153	P. B&B	B-L 20	3	Spi	Col 54030	S	G*	Col 3204	Ros	P 32x6	25	31½	203	67½			
Brookway EB	20	3975	6350	2500	153	Wis SU	4-45x5	G&O	Zen	Zen	L-N	Exi	12-220	D. B-L	B-L 30	3	Spi	Col 55004	S	S	Col 5403	Ros	P 32x6	28	28½	243	64			
Brookway EB4	20	4150	6400	2500	154	Wis Y	6-38x5	G&O	Zen	Zen	L-N	Exi	12-220	D. B-L	B-L 30	3	Spi	Col 55004	S	S	Col 5403	Ros	P 34x7	28	28½	243	64			
Brookway H	26	6450	7975	3000	182	Wis H	6-45x5	G&O	Zen	Zen	L-N	Exi	12-220	D-B-L	B-L 55	4	Spi	Wis 6731	R	R	Shu 5559B	Ros	P 32x6	30	26½	256	74			
Brookway JBF	16	3450	4700	1500	149	Wis F	6-31x4½	G&O	Zen	Zen	A-L	Exi	6-153	P. B&B	B-L 20	3	Spi	Col 54030	S	G*	Col 3205	Ros	P 32x6	25	31½	213	67¼			

Two

Electric Commercial Cars

Name and Model Number	Total Weight Resting on Four Tires	Chassis Weight—Exclusive of Battery	Minimum Load Capacity	Maximum Load Capacity	Chassis Price	Maximum Speed	Location of Battery	Mileage Per Charge	Motor	Controller	Speeds Forward	Drive	Rear Axle	Spring	Front Tires	Rear Tires	Steering Gear	Wheelbase	Per Cent of Weight on Rear Wheels
Electruck 48.....	8700	3600				15	A	50	G-E	G-E	4	C	Own	Eat	S 34x4	S 34x5	Ros	112	60
Electruck 39.....	10400	4200				15	A	50	G-E	G-E	4	C	Own	Eat	S 34x4	S 34x6	Gem	135	60
Electruck 27.....	32000	12200				12	A	50	G-E	Own	5	C	Own	Eat	S 36x7	S 40x14	Gem	168	70
O. B-B.....						13			G-E	Own		C	D		S 36x4	DS36x3½	Own	107	
O. B-C.....						11			G-E	Own		C	D		S 36x5	DS36x4	Own	135	
O. B-D.....						10			G-E	Own		C	D		S 36x6	DS36x5	Own	143	
Walker 10.....		2400				14	H&S	60	G-E	Own	4	S	Cl	Mat	S 32x3½	S 32x4	Ros	10°	66
Walker 20.....		3200				15	A	50	Wes	Own	5	Own	Own	Mat	S 34x3½	S 36x4	Ros	94°	66
Walker 25.....		3500				14	A	50	Wes	Own	5	Own	Own	Mat	S 34x4	S 36x5	Ros	101°	66
Walker 45.....		4400				14	A	50	Wes	Own	5	Own	Own	Mat	S 36x4	S 36x6	Ros	114°	66
Walker 50.....		4800				13	A	50	Wes	Own	5	Own	Own	Mat	S 36x5	S 36x8	Ros	126°	66
Walker 65.....		7000				11	A	50	G-E	Own	5	Own	Own	Mat	S 36x5	DS40x5	Ros	131°	66
Walker 75.....		7800				10	A	50	G-E	Own	5	Own	Own	Mat	S 36x6	DS40x6	Ros	141°	66
Ward A-211.....	4650	1800	600	1150		15	S	75	G-E	Own	4	W	She	She	S 32x3	S 32x3½	Own	83	56
Ward B-222.....	6000	2300	1020	1700		14	S	84	G-E	Own	4	W	She	She	S 32x3½	S 32x4	Own	61	62
Ward C-211.....	8000	2670	2170	2880		13	S	65	G-E	Own	4	W	She	She	S 32x3½	S 34x5	Own	96	64
Ward E-211.....	12000	3570	4290	5430		12½	S	56½	G-E	Own	4	W	She	She	S 34x4	S 36x6	Own	107	65
Ward G-211.....	16000	4500	6180	7760		11	S	44	G-E	Own	5	W	She	She	S 36x5	S 36x8	Own	120	68
Ward J-211.....	22500	6630	9500	11200		10	S	39½	G-E	Own	5	W	She	She	S 36x6	S 36x10	Own	136	70
Ward M-211.....	30000	8430	13780	15920		9	S	36	G-E	Own	5	W	She	She	S 36x7	DS36x7	Own	152	71

NOTE: Battery Equipment on all above makes is at the option of the purchaser. Battery Location Abbreviations: A-amidships; H-under hood; and S-under seat

KEY OF ABBREVIATIONS

For addresses of manufacturers listed below see Chilton Catalog and Directory

Wheelbase *More than one wheelbase furnished. Tires B—Balloon. P—Pneumatics standard equip. DP—Dual pneumatics standard equipment. S—Solids. DS—Dual solids. *—Tires at extra cost. †—Pneumatics can be furnished at extra cost. Engine Bud—Buda Co. Con—Continental M. Corp. D—Head and Side. FP—Full Pressure to all bearings including wrist pins. H—Overhead. HaS—American Car & Found. Co. Her—Hercules Motor Corp. I—In Head. Jackson—Master M. T. Mfg. Co. L—L-Head. Lyc—Lycoming M. Corp. PC—Pressure to all crankshaft and connecting-rod bearings. PG—Pump, Gravity & Splash. PS—Pressure with splash. SP—Circulating splash. T—T-Head. Wau—Waukesha M. Co. Wis—Wisconsin M. Mfg. Co. Yell—Yellow Sleeve V. E. Wks. X—Sleeve. Governor Dup—Eisemann Magneto Corp. Han—Handy Gov. Co. K. P.—K. P. Products Co. McC—E. R. Klemm. Mon—Monarch Gov. Co. Non—Not Supplied. Pha—Pharo Mfg. Co. Pie—Pierce Governor Co. Sim—Eisemann Magneto Corp. Wau—Waukesha M. Co.	Radiator Bow—Bowerbank, E. R. Co. Bus—Bush Mfg. Co. Chi—Chicago Mfg. Co. Fed—Fedders Mfg. Co. G&O—G. & O. Mfg. Co. Har—Harrison Rad. Corp. Lon—Long Mfg. Co. McC—McCord Rad. & Mfg. Co. McK—McKinnon Dash Co. Mod—Modine Mfg. Co. Per—Perfex Corp. R-T—Rome-Turney Rad. Co. U. S.—U. S. Cartridge Co. You—Young Rad. Co. Fuel System B.B.—Penberthy Injector Co. Car—Carter Carburetor Co. E—Electric Pump G—Gravity. Mar—Marvel Carburetor Co. O—Mechanical Pump P—Pressure. Sch—Wheeler Schebler Car. Co. Ste—Detroit Lubricator Co. Str—Stromberg Motor Dev. Co. Til—Tillotson Mfg. Co. V—Vacuum. Zen—Zenith-Detroit Corp. Electrical Systems †—Generator & Starter at Extra Cost. †—Starter not supplied, Generator at Extra Cost. *—Starter at Extra Cost. A-L—Electric Auto-Lite Corp. Apo—Apollo Magneto Corp. Bos-A—Am. Bosch Magneto Co. Bos-R—Rob. Bosch Magneto Co. Con—Conn. Tel. & Elec. Co. DJ—DeJon Elec. Corp. D-R—Delco-Remy Co. Dyn—Owen Dyneto Corp. Els—Eisemann Magneto Corp. Ext—Electric S. B. Co. Gor—R. J. Gorman Co., Inc. L-N—Leece-Neville Co.	N-E—North East Elect. Co. Non—Not Supplied. Pol—Prest-O-Lite Co. Sci—Scintilla Magneto Co. Spl—Splitdorf Electrical Co. USL—U. S. Light & Heat Corp. Ves—Vesta Battery Corp. Wil—Willard S. B. Co. Clutch and Gearset *—Other ratios optional. †—Auxiliary two-speed transmission optional. A—Amidships. B & B—Borg & Beck Co. B-L—Brown-Lipe Gear Co. Cot—Cotta Trans. Corp. Cov—Covert Gear Co. Det—A. J. Detiaff Co. D-G—Detroit Gear & Mach. Co. D—Disk. Ful—Fuller & Sons Mfg. Co. H-S—Merchant & Evans Co. J—Unit with Jackshaft. K—Cone. Lon—Long Mfg. Co. M. M.—Mechanics Mach. Co. Mun—Muncie Gear Works. O—Disk in Oil. P—Plate. Roc—Rockford Drill. Mach. Co. U—Unit with Engine. W-G—Warner Gear Co. Yell—Yellow Sleeve V. E. Wks.	Front and Rear Axles *—Two speed. ½—Semi-Floating. ¾—Three-Quarter Floating. B—Straight Bevel. Cla—Clark Equip. Co. Col—Columbia Axle Co. Con—Continental Axle Co. C—Chain. D—Dead. Eat—Eaton Axle Co. F—Floating. I—Internal Gear. R—Double Reduction. S—Spiral Bevel. Sal—Salisbury Axle Co. She—Sheldon Axle & Spring Co. Shu—Shuler Axle Co., Inc. Tim—Timken Det. Axle Co. Tor—Eaton Axle & Spring Co. W—Worm. Wis—Wisconsin Parts Co. Brake A—Rear Wheels only. B—Driveshaft and Rear Wheels. D—Jackshaft and Rear Wheels. E—4-Wheel Brakes. F—4-Wheel brakes with emergency on jackshaft. G—4-wheel brakes with emergency on driveshaft. Service Brake Type *—Mechanical. †—Hydraulic. †—Vacuum Booster. °—Compressed Air. Steering Gear CAS—Columbus G & P. Co. D-G—Detroit Gear & Mach. Co. Dod—Dodge Bros. Co. Gem—Gemmer Mfg. Co. Han—Hannum Mfg. Co. Jac—Saginaw Products Co. Lav—Hannum Mfg. Co. Ros—Ross Gear & Tool Co.
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A rainy day breakdown ...then he "lifted the hood"



A hurry call for help one rainy day started him thinking. Out on the road was another truck in trouble. Another truck idle. Another shipment delayed. Another debit entry on the maintenance cost sheets.

When the truck was finally returned to the service station, he lifted the hood and made an investigation. He soon found out where the trouble was. Water had penetrated into the magneto and put it out of business; yet the magneto had only recently been installed. "Why we used to have the same trouble 20 years ago," he thought to himself, "It's a wonder, in these modern times, that someone hasn't designed a waterproof magneto."

Someone has. Robert Bosch has. It is the Original-Bosch Super-Energy Magneto. Introduced a little over a year ago, it is a really modern magneto. Modern not merely because it is truly waterproof, but because it combines every other characteristic required of a modern magneto:



- its bearings are packed in permanently lubricating grease . . . which makes lubrication of ball bearings unnecessary.
- its construction is absolutely dustproof.
- its distributor plate design makes it impossible for water to reach the high tension terminals.
- its distributor plate fits snug tight always.
- it requires no cable terminals.
- it has a sturdy one-piece aluminum frame instead of a die-cast zinc frame.
- it has laminated pole shoes instead of cast iron pole shoes . . . an important factor in the super-energy produced by this magneto.

If you want your customers to enjoy all the advantages which these improvements make possible, you should investigate the Original-Bosch Super-Energy Magneto. For it is the *only* magneto that combines all these modern requirements.

The striking differences achieved by the Original-Bosch Super-Energy Magneto in the economical and dependable performance of any vehicle, are plainly presented in our new book "Lift the Hood." If you will mail the coupon for a copy we shall also send you a copy of another new booklet, "Ignition Briefly Described," containing an elementary description of various types of ignition equipment.



The Original
Bosch

Super-Energy

TRADE
MARK



ROBERT
BOSCH A.-G.

Magneto

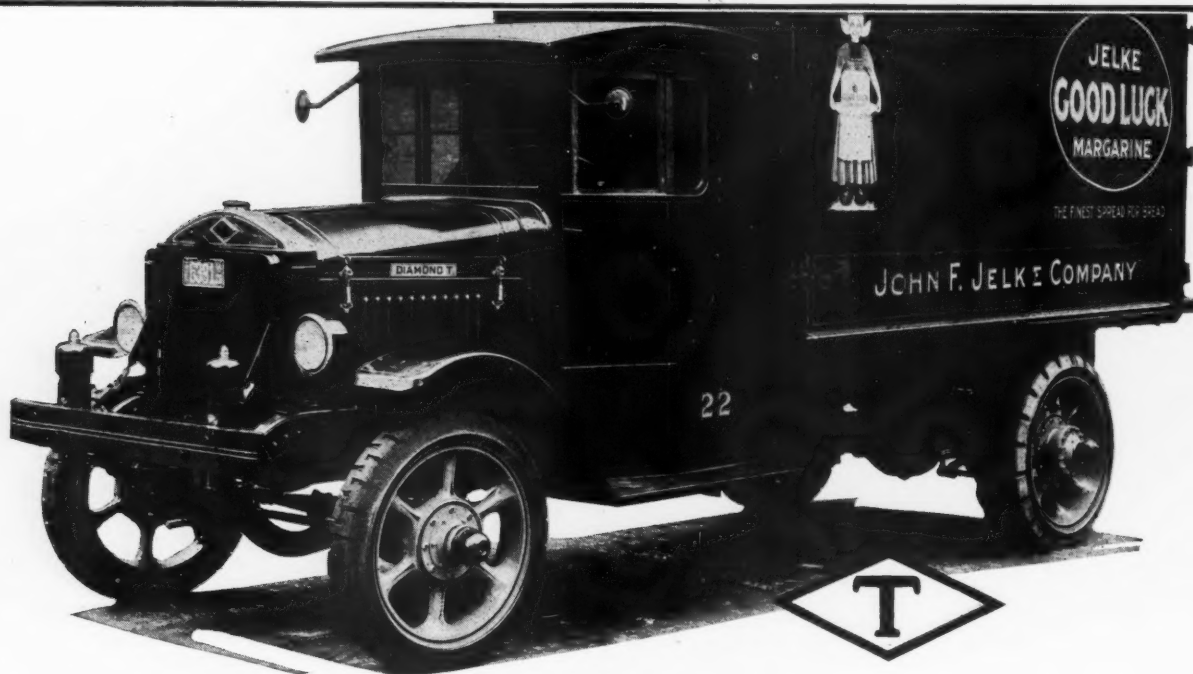
ROBERT BOSCH MAGNETO CO., INC.
3603F Queens Boulevard,
Long Island City, New York

Please send a copy of your new book "Lift the Hood" together with a copy of "Ignition Briefly Described."

Name

Address

Ungoverned Power Destroys Even the Most Rugged Machine



For Safe, Economical Operation

"Diamond T" Trucks Are PIERCE protected!

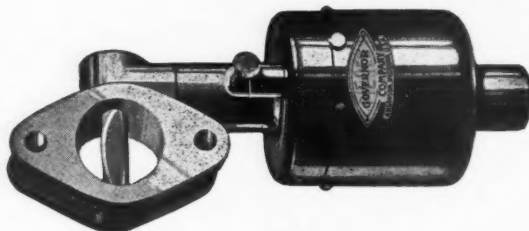
Power protection assures more dependable service, longer life, freedom from accidents caused by speeding, fewer repair bills, and lower operating costs.

That's why leading manufacturers such as "Diamond T" have adopted dependable PIERCE GOVERNORS as standard equipment.

By protecting the engine against racing and vibration, PIERCE GOVERNORS protect every moving part—increasing efficiency and add-

ing thousands of miles of extra service. By preventing excessive speed PIERCE GOVERNORS prevent many accidents, save tires and brake repairs.

See to it that every truck or bus you operate is PIERCE equipped. Your cost per mile will be greatly reduced—and you'll speed service and increase profits.



*Simple, Dependable, Positive,
Fool-Proof*

PIERCE GOVERNORS are a marvel of rugged simplicity. Nothing to get out of order. They deliver the full rated horsepower of the engine without handicapping the "pick up." Fully guaranteed. Used by over 350 manufacturers of gasoline powered equipment.

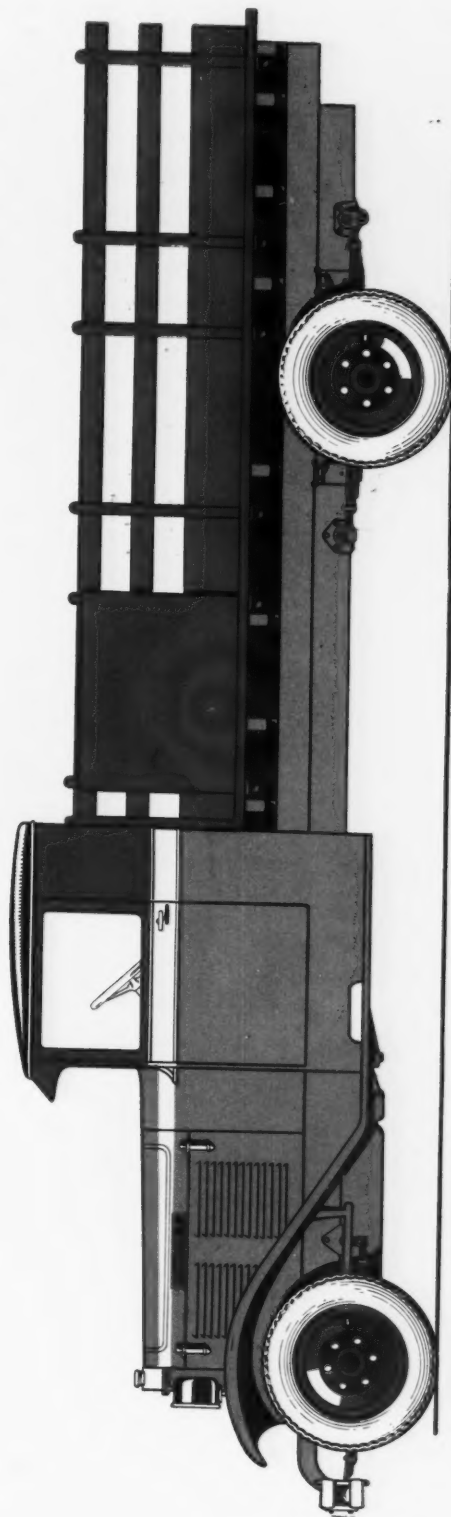
Send today for your copy of our booklet No. 44—it will show you the way to liberal savings.

The Pierce Governor Co., Anderson, Ind.

"WORLD'S LARGEST GOVERNOR BUILDERS"

Pierce Governors
for Automatic  *Speed Control*

A NEW TWO-TON SIX
SWIFT, STURDY **ECONOMICAL**



Model 302
DIAMOND T
Two-ton Six

\$1650

Chassis f. o. b.
Chicago

Sweeping the Country!

And why not? There's more *truck* for every one of these sixteen hundred and fifty dollars than ever traveled behind a radiator before!

More power, more speed, more safety, more quality—and there's proof of this to spare! *Why shouldn't it sweep the country*, backed as it is by a pioneer concern with 24 years of success building automotive vehicles?

What a truck to sell! What a truck to *buy*! A great 60-horsepower 6-cylinder motor—7 main bearings—oil filtrator—multiple disc clutch—4-wheel hydraulic brakes—4-speed transmission—cam and lever steering—7 Budd Steel wheels—6 32x6 tires—tire carrier—chromium plated bumper—air cleaner—speedometer—instrument panel—helper springs—electric head and tail lights—starter, generator, battery—motor heat indicator—heavy duty construction—passenger car performance—and—

"The Handsomest Truck in America"

What truck at near its price matches its value? Couldn't you sell it easier than you could sell against it?

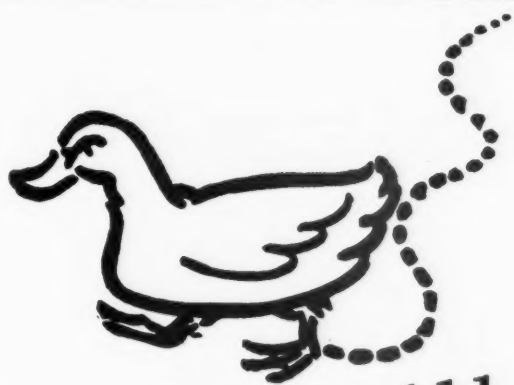
That's *one* Diamond T. There's a tonner at \$1095—and a full line, up to 7½ tons. If your organization measures up to the Diamond T proposition, we should get together. Why not write—today?

DIAMOND T MOTOR CAR COMPANY

Twenty-Sixth Street

Chicago, Illinois





they can't wobble . . .



they can't shimmy . . .




they stop side-sway . . .


{ 3 tire - saving reasons why dealers
recommend "Budd Duals" instead
of just "Duals" }

"Stopability!"



Thermoid
Brake Lining
Service

When you buy Brake Lining
you are not buying merely
Brake Lining  but
STOPS

For Quick Smooth
Stops  and the
Greatest Number
of them ~ Thermoid



THERMOID

Hydraulic Compressed
BRAKE LINING
All Weather Quality—"For Short Stops and Long Service"

THERMOID RUBBER COMPANY - *Factories and Main Offices* - TRENTON, N. J.
Hydraulic Compressed and Interwoven Brake Lining—Transmission Lining—Radiators—Clutch Rings—Universal Joint Discs—Mechanical Rubber Goods



The coal dealer has a place for Heil Hand Hoist and Dump Body equipment.



For hauling sand, gravel, and other building supplies—Heil Hand Hoist and Dump Body equipment is indispensable.

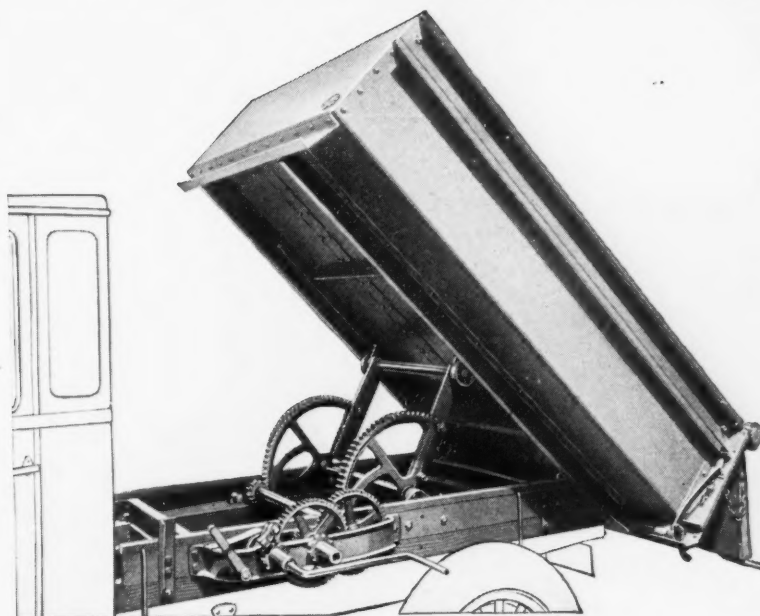


Nurseries and landscape gardeners will find Heil Hand Hoist and Dump Body equipment a time saver.



Municipalities—large or small, can use Heil Hand Hoist and Dump Bodies for all around light trucking service.

Heil Hand Hoist and Model 90 Dump Body



The Heil Hand Hoist and Model 90 Dump Body meets the specific need for efficient hoist equipment on light duty trucks at a cost in keeping with the service rendered. No matter what products or materials are to be handled a sturdy Heil Dump Body and a Heil Hand Hoist will prove indispensable. For the coal dealer, building supply dealer, municipalities, country clubs, nurseries, in fact, in any line of business where light duty trucks are used for general hauling purposes, Heil Hand Hoists and Dump Bodies will more than prove their worth. Get the increased business to be obtained in your territory by selling your prospects complete Heil-Equipped service units.

THE HEIL CO.

1143-50 Montana Ave.

Milwaukee, Wis.

Manufacturers of Dump Bodies, Hoists and Tanks.

CLIP THIS COUPON!

MAIL TODAY!

The HEIL CO., 1143-50 Montana Ave., Milwaukee, Wis.

Please send me Bulletin H. C. I. which contains complete information about Heil Hand Hoists and Heil Dump Bodies.

Print Name

Firm Name

Address

BUDA Performance—

Under no circumstances would we
accept any engine but BUDA,
says Checker Cab President

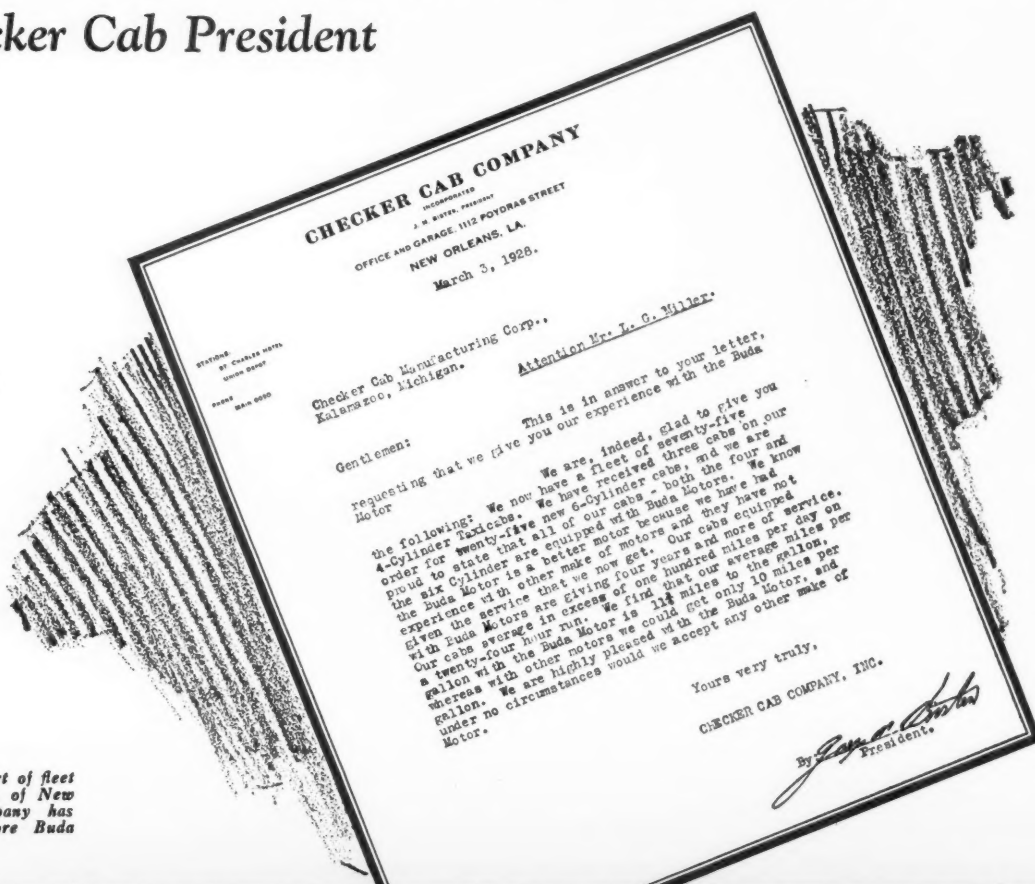
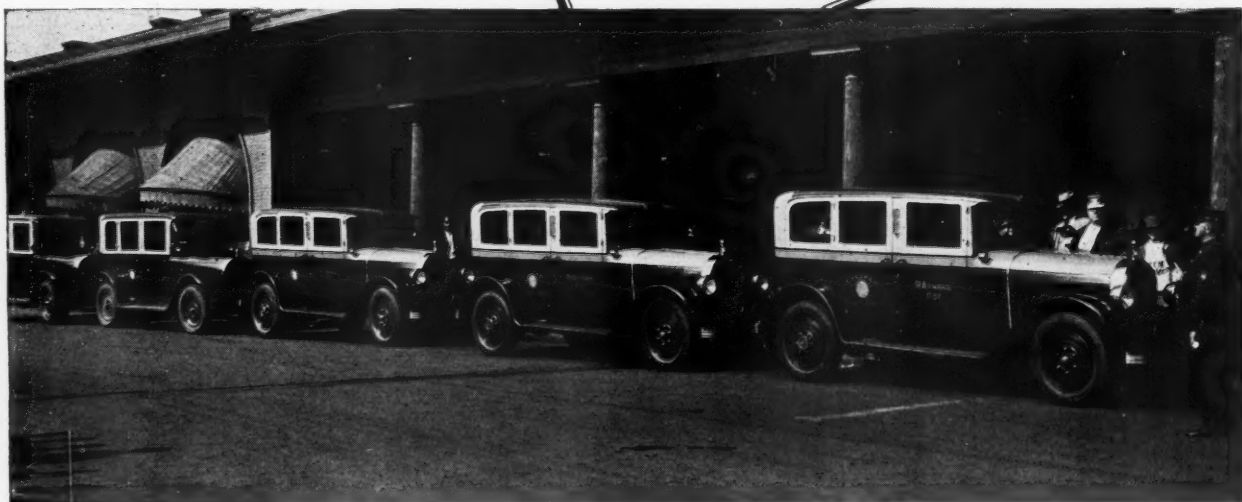


Illustration shows part of fleet of Checker Cab Co., of New Orleans. This company has just ordered 25 more Buda powered cabs.



THE BUDA COMPANY
HARVEY (Chicago Suburb) ILLINOIS

Members of Motor Truck

BUDA
POWER

Industries, Inc., of America

"BIGGER PAYLOADS AND MORE OF THEM"

Wheels like these sell trucks like these and produce letters like these . . .

On its used car floor The Mack International Truck Co. of Los Angeles had a 2½-ton chain drive Mack, a 3-ton Moreland, and a 2½-ton Mack.

In came a firm of Japanese hog farm operators . . . in came Walter Woolhouse, an independent contractor who handles a lot of oil well work . . . in came Acosta & Rich of Pacoima, hay growers and jobbers.

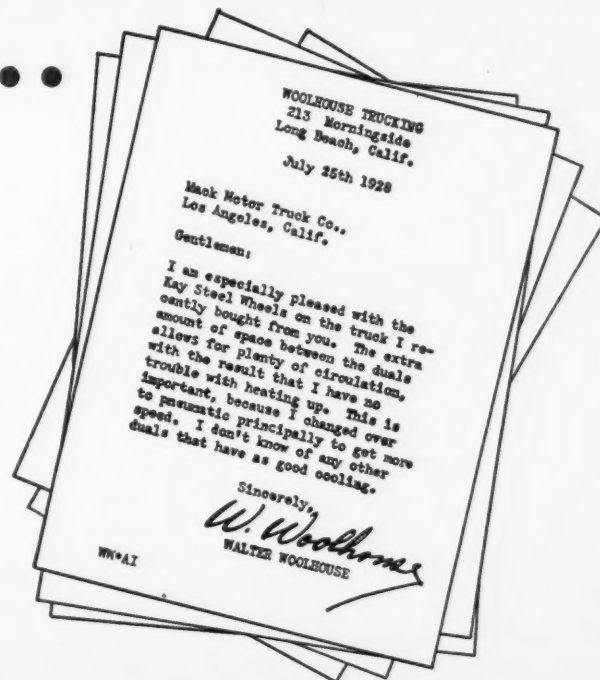
"Yes," said they, "they're good trucks, but we want pneumatic equipment."

"That's easy," said the Mack people, "we'll have these solids off and pneumatics on in a jiffy."

"Sold," said the prospects, in one-two-three order.

In no time at all, and at an average labor cost of \$26 per truck, the changeover was made with *Kay Steel Wheels*.

Three satisfied owners have used trucks that are giving them new car service, at considerably less than new car cost. The Mack



International Truck Co. has three less trade-ins to move.

Have you considered the possibility of modernizing your trade-ins, with *Kay Steel Wheel Changeovers*? The booklet pictured below tells you how easily, economically, it is done. Let us send it.

KAY STEEL WHEEL CO.

2721 Elm Street
Los Angeles, California



620 So. Delaware Ave.
Philadelphia, Penn.

Change Over to Pneumatics on
KAY STEEL WHEELS
THIS BOOK SHOWS HOW

Simply pin this coupon to your
letterhead or write name and
address and mail.

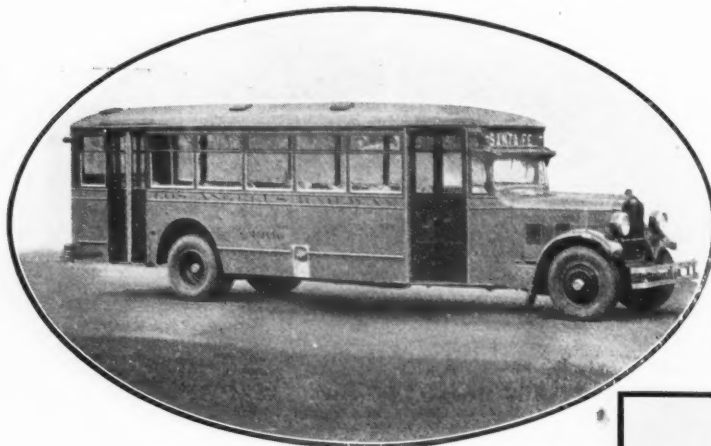


KAY STEEL WHEEL CO.
P. O. Box 235, Los Angeles, Calif.

Mail me a free copy of your Changeover Booklet

Signed
Firm
Address

Performance



White six-cylinder bus with 29-passenger pay-enter body

Using two White tower trucks and special reel equipment mounted on a White chassis, Cleveland Railway Company removes and restrings trolley wire in one operation



Model 54, six-cylinder White parlor coach for 29 passengers

WHITE TRUCK CHASSIS

Light Delivery

Model 15-B—1-ton	\$1,545
Model 57 —1¼-ton (Special)	2,725
Model 20-A—1½-ton	2,125

Fast Express

Model 56 —2-ton	\$3,125
Model 51-A—2½-ton	3,750



Heavy Duty

Model 58—3-ton (High Speed)	\$4,400
Model 55—3½-ton	4,650
Model 52—Heavy Duty	5,100

WHITE BUS CHASSIS

Model 53 —16 to 21 passengers	\$ 4,250
Model 50-B—25 to 29 passengers	5,350
Model 54 —25 to 29 passengers	7,500
Model 54-GE—Gas-Electric	11,250

All prices f. o. b. Cleveland

SEE THE WHITE TRUCKS AND BUSES AT A. E. R. A.



WHITE

and WHITE

With Profit

White Trucks and White Busses earn the most profit for electric railways because a White delivers the most money-earning miles.

AFTER all is said and done, the acid test of a motor bus or truck for any electric railway service is—*earning power*.

Manufacturers' claims, even columns of mechanical specifications and engineering details, mean little unless the end of each month shows that truck or bus operating at a profit for its owner. Electric railways must depend on their motor equipment for the same thing the public demands of the railways—unfaltering service at low cost—and *earning power* on the long fast runs as well as the short heavy hauls.

That is why 45 of the country's leading electric railways are operating 1,794 White Trucks and Busses in fleets of 10 or more, and hundreds of other Whites are serving the industry in single installations or fleets of less than 10. Their owners know that Whites go on earning long after their cost has been written off the books.

In buying a White you have a complete line to select from—four and six-cylinder busses and a wide range of truck models of all capacities from one ton up. In efficiency, economy, dependability and flexibility they have proved their leadership.

THE WHITE COMPANY, *Cleveland*

Write for information about White's attractive dealer franchise.
Your territory may be open for some live prospective dealer.

CONVENTION IN CLEVELAND, SEPTEMBER 22 TO 28

TRUCKS

BUSSES



MAKE SURE YOUR TRUCKS STAY ON THE JOB — USE DIXON'S

Keeping trucks out on the road—doing their jobs day after day—is only possible where 100% lubrication protection is provided to the working parts of the transmissions and differentials.

This is just what Dixon's 677 gives you—a film of grease and a film of graphite—double protection against gear troubles—100% lubricant! And this is possible only in graphited grease made the way Dixon makes it. Pure flake graphite plus grease

—mixed in the right proportions.

Dixon's selected flake graphite has the peculiar thinness and flatness of flake, a toughness and elasticity that will make it build up and not adhere to itself, ball up or pack.

Dixon's 677 is the ideal lubricant for the differentials, transmissions and chassis of trucks and buses. The Dixon Sign will bring in hundreds of customers and keep them coming back. Joseph Dixon Crucible Co., Jersey City, New Jersey.

DIXON'S

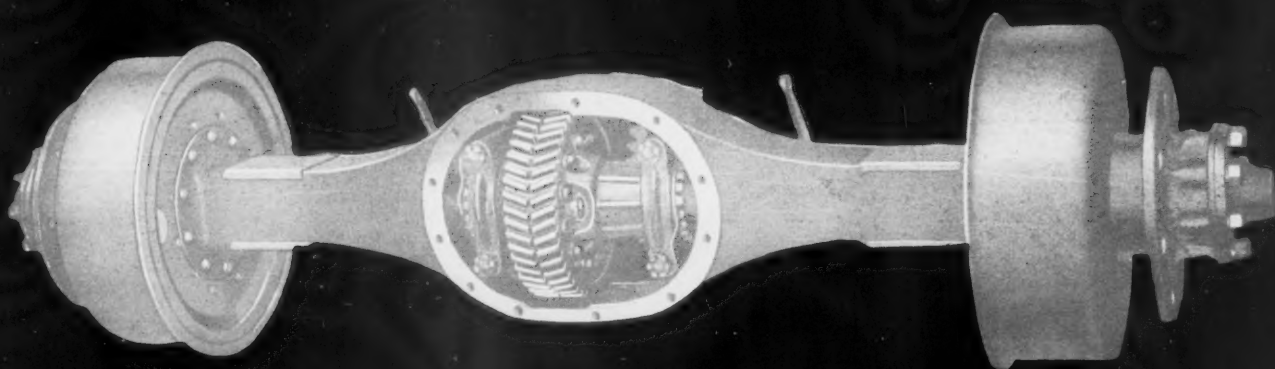
Graphite
Grease

677

TWO GOOD LUBRICANTS IN ONE

Simplicity

OF DESIGN



Ground and Body Clearance
Strength in Differential
Maximum Braking Surface
Efficient Lubrication
Clean-cut Appearance
Simple Adjustments
Bigger Bearings
Quiet Running



EATON

HERRINGBONE DOUBLE REDUCTION AXLES



THOSE interested in the manufacture or use of commercial vehicles will find it worthwhile to discuss their axle problems with Eaton. Data and knowledge gained through intimate contact with the automotive industry since its pioneering days aid Eaton in being of real service to those granting the opportunity.

THE EATON AXLE & SPRING COMPANY
Cleveland, Ohio

*Eaton Axles • Eaton Bumpers • Eaton Springs
Perfection Heaters*

EATON
HERRINGBONE DOUBLE REDUCTION AXLES

Fisher Motor Trucks



ARE THOROUGHLY ENGINEERED, OF LATEST DESIGN, AND BUILT BY ONE OF THE OUTSTANDING BUILDERS IN THE AUTOMOTIVE INDUSTRY, ALBERT FISHER—KNOWN THE WORLD OVER FOR PRODUCING QUALITY MOTOR TRUCKS.

FISHER TRUCKS GIVE ASSURED EFFICIENCY IN ALL KINDS OF HAULAGE SERVICE. INFORMATION ON THE COMPLETE LINE OF MODELS SENT UPON REQUEST.



STANDARD MOTOR TRUCK CO.
DETROIT, MICH., U. S. A.

Combined AUTOMOBILE TRADE JOURNAL *and* MOTOR AGE

Now! MORE
THAN

60,000

**Paid Automotive Trade
Circulation
in
One Great Monthly
Standard Size
Dealer Publication**

And this is almost double the net paid trade
circulation of the next nearest competitor.

Come to Automotive

Now!

"AUTOMOBILE TRADE JOURNAL *and* MOTOR AGE"

Effective December 1st, the Chilton Class Journal Company announce the consolidation of *Automobile Trade Journal* and *Motor Age* into one outstanding monthly automotive trade publication, to be known as "*Automobile Trade Journal and Motor Age*."

This will provide at once the greatest paid circulation, more than 60,000 — almost double the net paid trade circulation of the next nearest competitor — plus the most responsive body of readers available in any single pub-

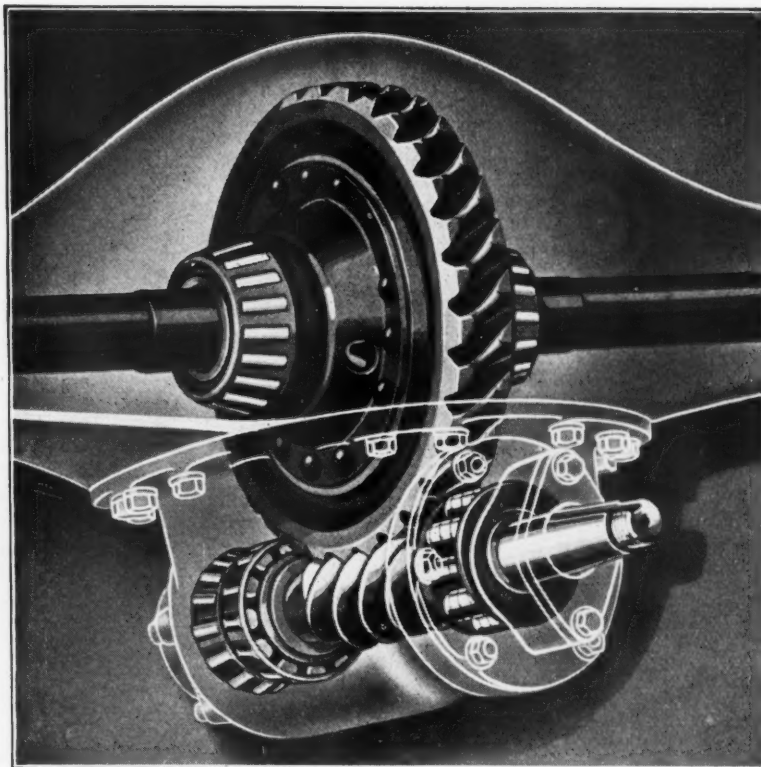
lication in the automotive field. The result: a bigger and better monthly automotive trade publication; 4-color covers; standard size overall—7" x 10" type page size; unequalled buying power; outstanding circulation and editorial achievement; combination of the best features of both, plus many new services never before achieved.

Let us point out to you the great opportunity and economy available for you through "*Automobile Trade Journal and Motor Age*."

ive Headquarters —

**AUTOMOBILE TRADE JOURNAL
and
MOTOR AGE**

A Chilton Class Journal Publication
Chestnut and 56th Streets, Philadelphia, Pa.



Better because it's Timken

Timken "F J" Worm Gearing has these definite superiorities over other types of worm gearing—

- larger area of tooth
- reduced rubbing velocity
- increased rolling action
- greater torque action
- less friction
- higher efficiency

Timken has the exclusive right to manufacture "F J" Worm Gearing in the United States.



THE TIMKEN-DETROIT AXLE CO., DETROIT, MICH.

TIMKEN AXLES

Vesare stops Vertical Mileage-



— with HOUDAILLE

Hydraulic Double-Acting Shock Absorbers

Vertical mileage shoots costs up and cuts profits down. The builders of Vesare street car type coaches are ending Vertical Mileage by making Houdaille hydraulic double-acting shock absorbers standard equipment. Houdailles give a smoother ride, steadier control, better traction and lower operating and maintenance costs.

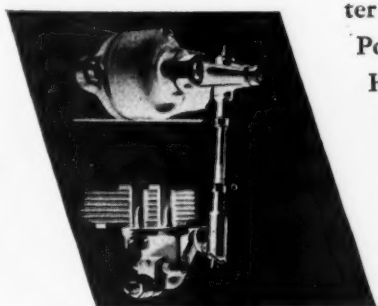
Positive spring control is today's forward step in truck and bus design.

Houdaille Hydraulic double-acting shock absorbers control spring action in both directions,— up and down. They automatically and instantly increase their resistance in proportion to the speed. They absorb the impact and recoil of the greatest bumps—no relief valves are necessary to protect the instruments. Houdailles have only one moving part.

It works in fluid under tremendous pressure. Houdailles are directly connected between axle and frame by a ball-jointed arm. They are designed as an integral part of the chassis. They are built to give service,—not require it.

Don't let Vertical Mileage increase the operating risk and cost of your trucks and busses!

HOUDE ENGINEERING CORPORATION, Dept. CJ-9
537 E. Delavan Ave., Buffalo, New York



Houdailles have been made standard equipment by the engineers of the following trucks and busses:
— Ford, Pierce-Arrow, Corbitt, Henney, Northland and Vesare.

HOUDAILLE

Hydraulic Double-Acting
SHOCK ABSORBERS



Where Gas is Petrol at 40 Cents per Gallon

The Caledon Rigid Six-Wheeler, made in Glasgow, uses a Hercules Engine. Smooth, flexible Hercules Power easily meets *all* operating needs.

High performance is habitual, and economy is inevitable when power is supplied by Hercules Engines. Trouble-free endur-

ance, reliability, season after season, makes Hercules Engines "right at home" wherever they are.

There is a Hercules model in a four- or six-cylinder type which will do an unbeatable job of power production for any requirement in the heavy-duty transportation field.

HERCULES MOTORS CORPORATION

General Offices
Canton, Ohio, U. S. A.

West Coast Branch
Los Angeles, Calif.



Hercules Engines

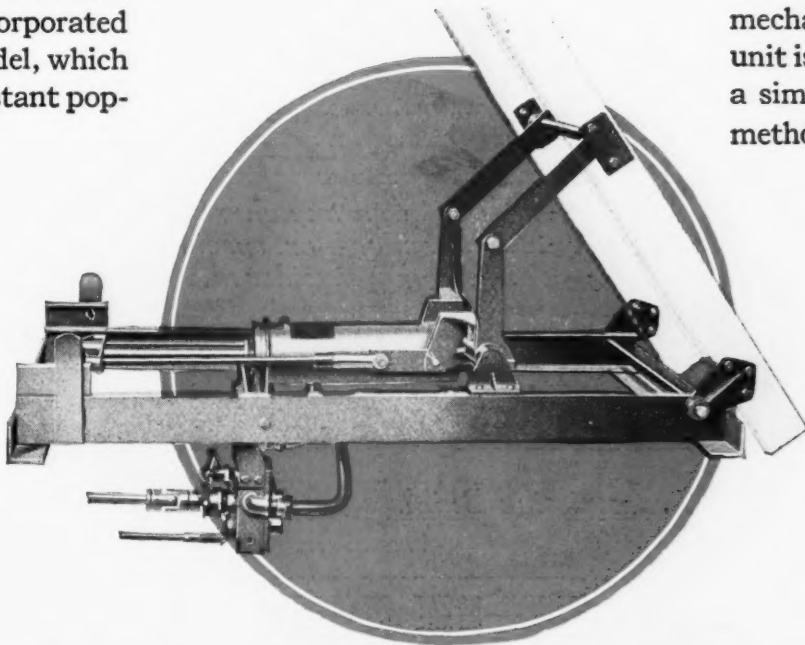
FORD "AA" TRUCKS

Equipped with
St. Paul
VERTICAL AND UNDERBODY
HYDRAULIC HOISTS

Now Ready!

New Model 4UBS St. Paul Underbody Hydraulic Hoist, designed for Ford Model "AA" one and one-half ton trucks. The high dumping angle, quick load discharge and economy of operation, characteristic of St. Paul Hoists, are incorporated in this new model, which has met with instant popularity.

Complete Assembly consists of the parts pictured in black, namely, the hoist with pump; and the necessary high and low pressure piping, hoist sub-frame, body hinge rod and body guides and hinges, also power take-off, control and driving mechanism. The entire unit is ready to mount by a simple and inexpensive method.



Hydraulic Hoist Manufacturing Co.

Factories at St. Paul, Minnesota. Distributors and Service Stations Everywhere

Write for Name and Address of One Nearest You

"Ask the Dump Truck Driver on the Job"



"FROM ROUGH BILLET TO FINISHED PRODUCT"

FULLER is the only builder of transmissions in the world that completely controls every operation in the manufacture of transmissions *from rough billet and casting to the finished product.*

Casting, forging, heat treating, cutting gears — every operation is handled under our own roof, by our own men, using special tools of our own design, working to our own high standards of quality and efficiency down to the smallest detail.

Naturally, this assures the user peak efficiency in service, low up-keep cost, simplified replacement of any parts, and generally *greater satisfaction.*

For twenty-six years we have been constantly adding to our transmis-

sion building facilities and experience. Our ambition, equipment, and resources have been concentrated upon the one job of making better and better transmissions for heavy-duty automotive operation. We are still at it.

How well we have succeeded and *are* succeeding is best evidenced, we believe, by our roll-call of transmission customers, which includes many of the country's leading manufacturers of trucks, tractors and busses.

We have progressed from a modest but well-founded beginning to a still modest, but substantial, firmly established, self-contained enterprise that is more or less unique in the automotive industry.

Our engineers will gladly go anywhere for conference when either standard or special transmissions are being considered.

FULLER & SONS MANUFACTURING CO.

Division of Unit Corporation of America

KALAMAZOO, MICHIGAN


Transmission Builders for 26 Years

**STANDARD
and SPECIAL
TRANSMISSIONS**

Fuller

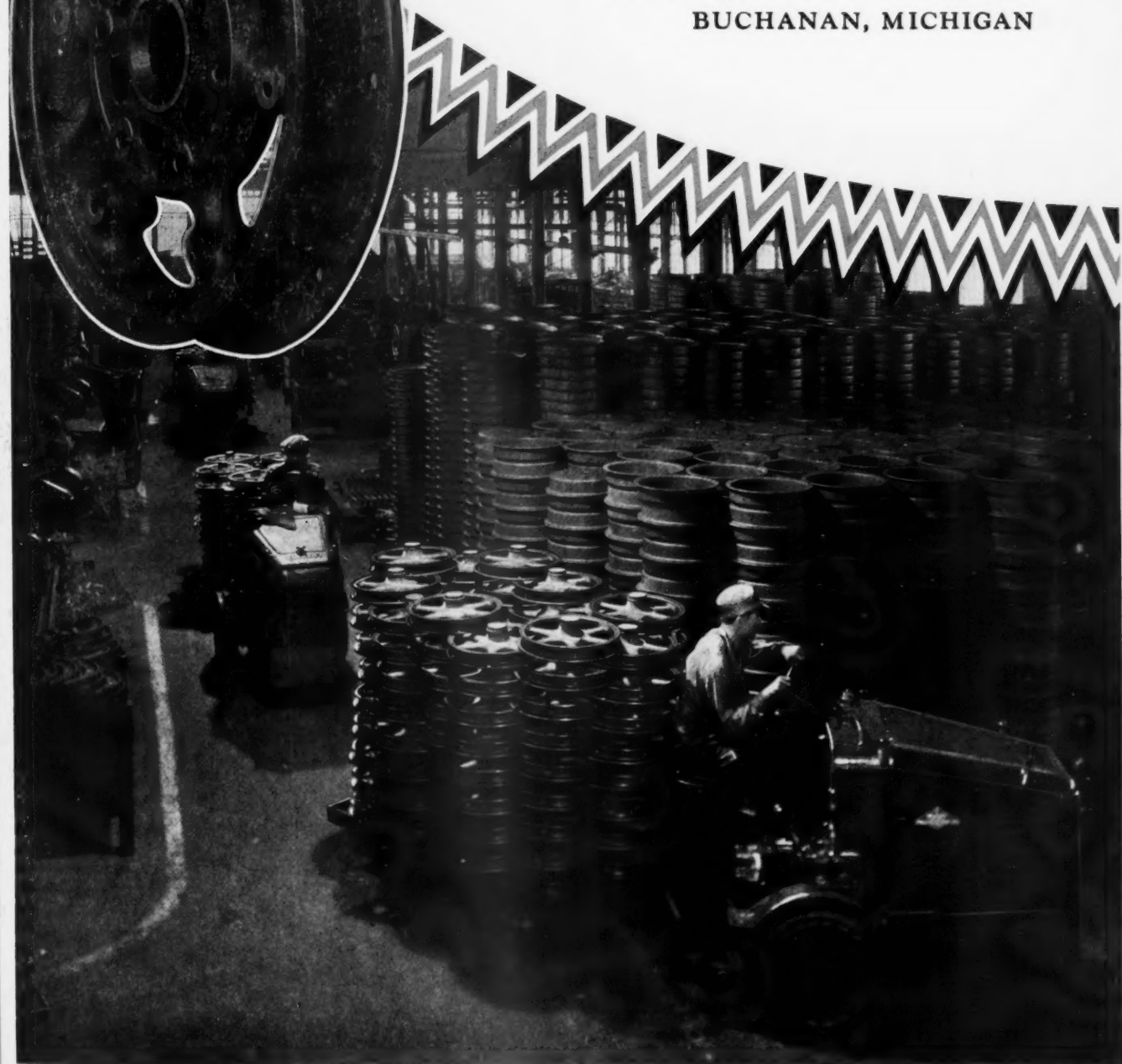
**FOR TRUCKS
TRACTORS
and BUSSES**

TRANSMISSIONS



Cool brake drums mean
brake efficiency. Clark Truck
Wheels with their hollow spokes
quickly radiate and dissipate
brake drum heat.

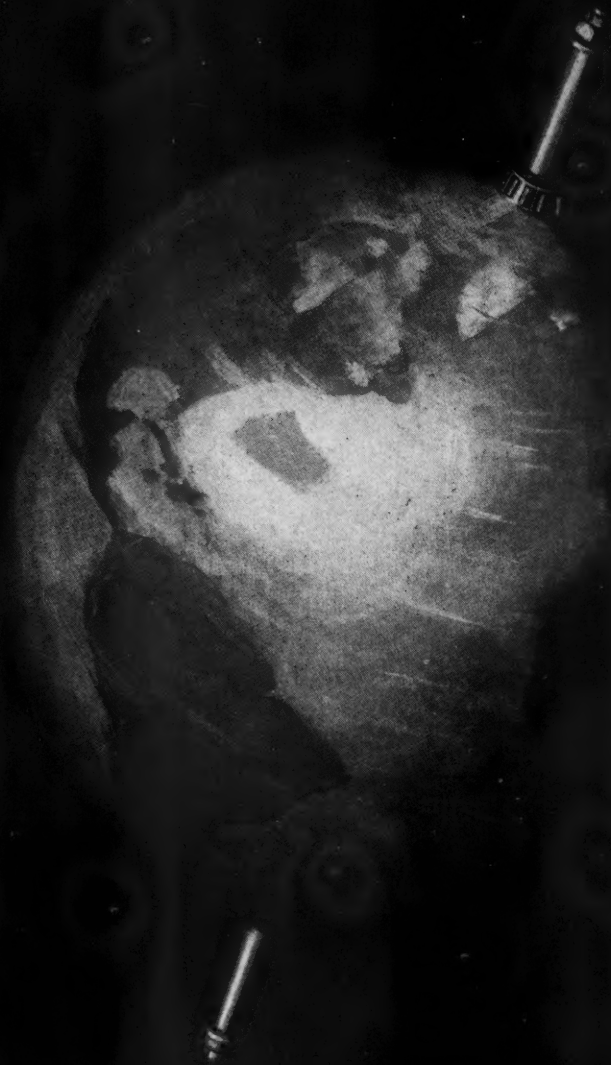
CLARK EQUIPMENT COMPANY
BUCHANAN, MICHIGAN



CLARK TRUCK WHEELS

with Strength of Steel

SPEEDING THE PROGRESS OF THE WORLD



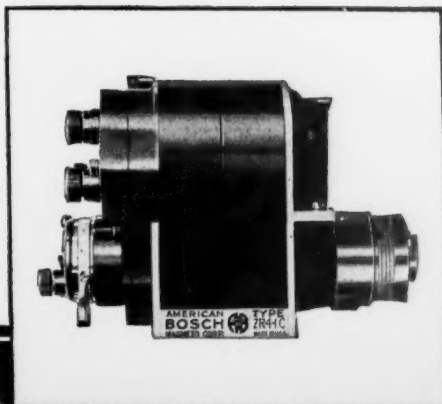
Cast steel housings are used exclusively in Clark Truck Axles: annealed and heat treated under exact temperatures they embody the rugged strength essential for modern motor trucks carrying excessive overloads. Thus we provide superior strength with light construction: minimum deflection and vibration and quiet gear operation.

CLARK EQUIPMENT COMPANY
BUCHANAN - MICHIGAN

CLARK AXLES

for ECONOMY of OPERATION

Bosch Magneto
Type ZR-4IC

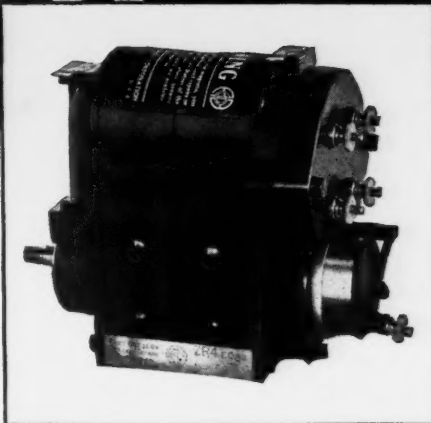


The outstanding successes in the motor truck field listed on this page equip their trucks with the Bosch Magneto. Their engineers have learned through years of experience that the Bosch Magneto is an economy factor of first importance for truck owners. The Bosch Magneto assures freedom from ignition troubles through the severest work and weather conditions. See that Bosch Magneto dependability is back of the trucks you buy.

BOSCH MAGNETO IGNITION

Makers of Bosch Magneto Equipped Trucks

White Motor Company . Cleveland, Ohio
The Autocar Company . . Ardmore, Pa.
Diamond T Motor Car Co. . Chicago, Ill.
Reo Motor Car Company . Lansing, Mich.
Nelson Le-Moon Company . Chicago, Ill.
Stewart Motor Corp. . . Buffalo, N. Y.
Republic Motor Truck Co. . Alma, Mich.
Acme Motor Truck Co. . Cadillac, Mich.
American-La France Fire Engine Co.
Elmira, N. Y.
LeBlond Schacht Co. . Cincinnati, Ohio



Bosch Magneto
Type ZR-4

AMERICAN BOSCH MAGNETO CORP.
SPRINGFIELD, MASS. Branches: New York Chicago San Francisco

2000 Service Stations—Service Everywhere

A Full Load

on a Full

Cushion Tire

TRACTION

MILEAGE



If you believe a tire should be designed and built for the hauling duty it tackles, then you want the Goodyear Heavy Duty Cushion for hauling heavy loads at a profit.

Its All-Weather Tread has the tractive power to "get up and go!" Its tough, strong, long-wearing compound assures long mileage. Its resilient cushioning protects the load

and saves wear and tear on the truck.

This super-tire is one of Goodyear's

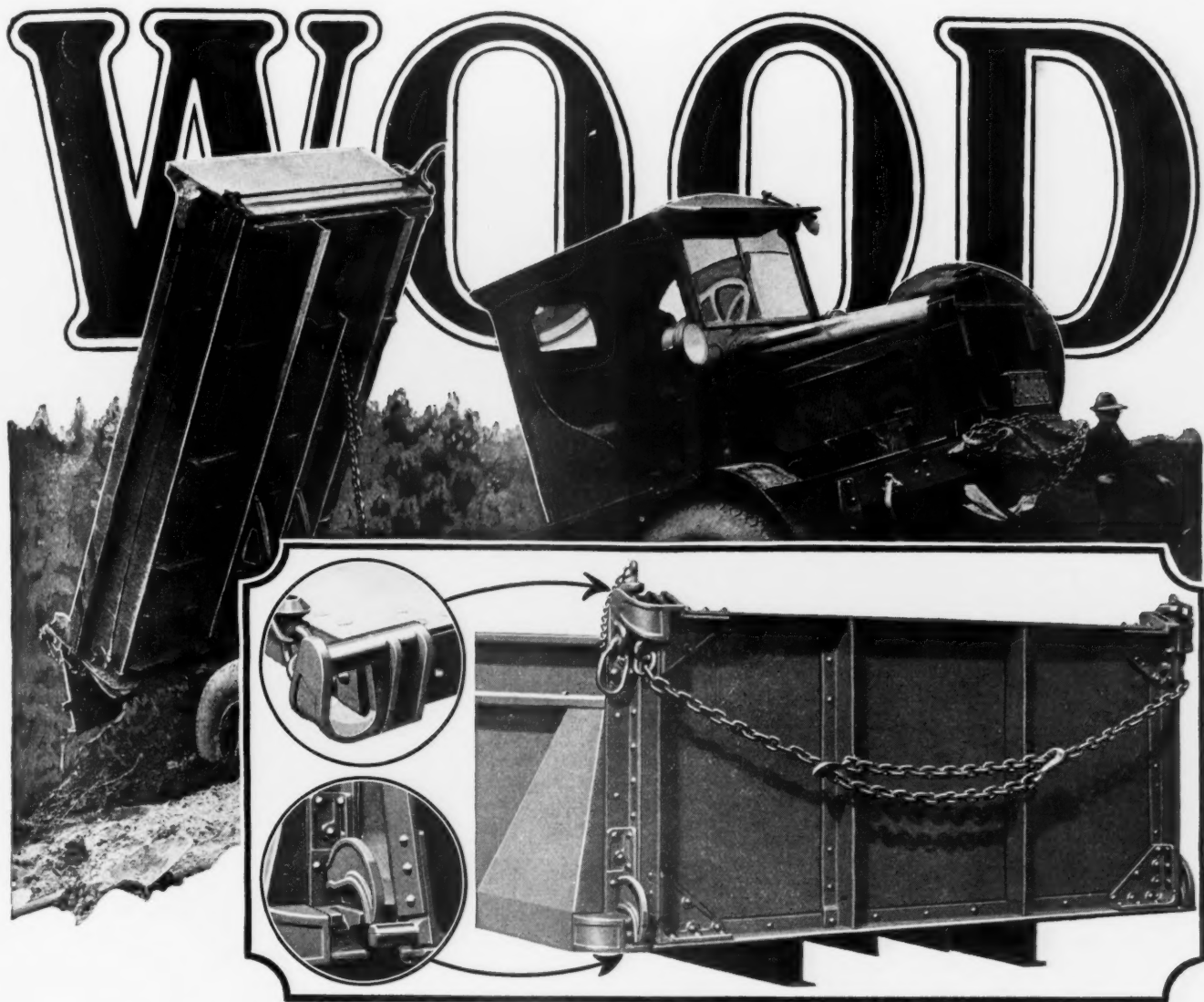
complete line of the right truck tires for every hauling need—heavy duty cushions, pneumatics, super cushions, solids.

Goodyear Truck Tire Experts are at your command for consultation in the proper type and size for your hauling. You are sure to go right on Goodyears.

The Greatest Name in Rubber



Copyright 1928, by The Goodyear Tire & Rubber Co., Inc.



HOISTS-BODIES

Through a period of continuous growth covering eighteen years which parallels the entire life of the dump truck industry, we have never sacrificed our close, personal contact with dump truck users. Every transaction whether with the owner of one dump truck or with a big fleet corporation is a personal transaction.

This personal service has created a relationship which is appreciated alike by users of dump trucks and ourselves.

A WOOD STEEL DUMP BODY for every purpose and requirement. A WOOD HOIST for every make, model and capacity of motor truck. A Sales and Service Organization that is world wide.

Complete information upon request.

Wood Hydraulic Hoist & Body Company

Pioneer Builders of Good Hoists and Steel Dump Bodies

DETROIT, U. S. A.

FISK MULTIPLE CABLE BEAD

*Inside Quality that you can see
only in your tire cost records*

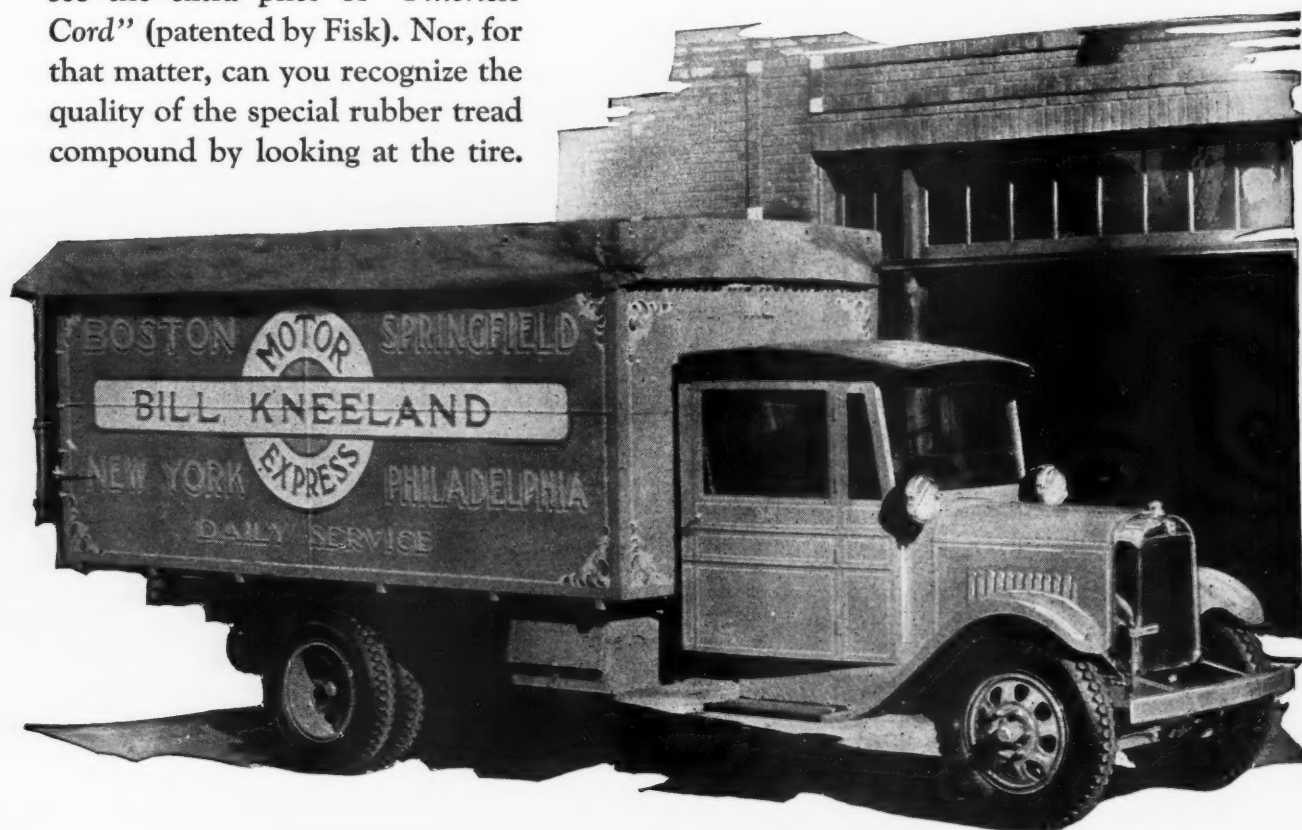
BUILT into every Fisk Transportation Cord Tire are multiple beads of steel strands—so placed that they evenly distribute all strain and stress of road impact—and prolong the life of the tire.

When you look at the tire, you can't see the multi-cable bead, neither can you see the extra plies of "Fillerless Cord" (patented by Fisk). Nor, for that matter, can you recognize the quality of the special rubber tread compound by looking at the tire.

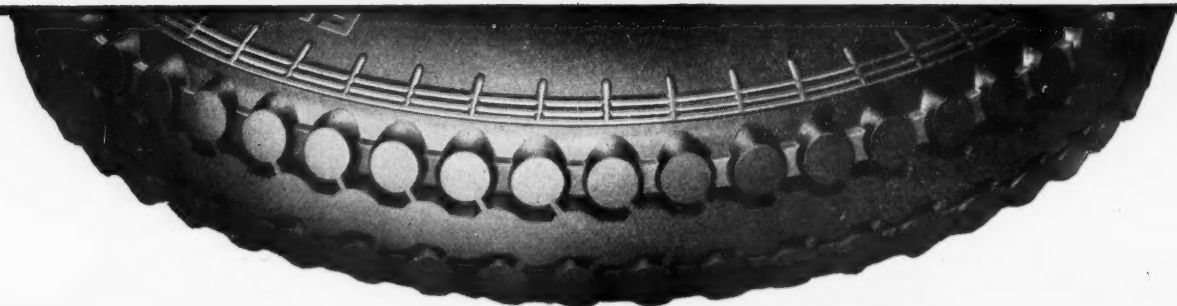
But you can see the value of all these original and exclusive Fisk features by looking at your tire cost records.

You will find that these Fisk Transportation Cords give *consistently higher mileage*—which means lower tire costs, and therefore lower delivery costs, *per mile*, due to the *inside quality* of the tires.

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



FISK TIRES



PERSONNEL



LONG PRODUCTS
AUTOMOTIVE
CLUTCHES
AND
RADIATORS

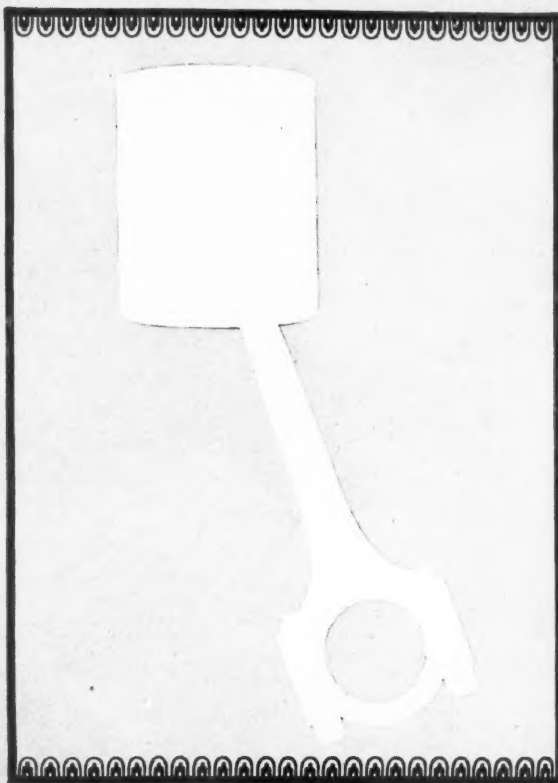
The confidence gained by Long Products in the past 25 years is due largely to the devotion and integrity of the officers and employees of this company, the majority of whom have been a part of this organization for many years.



LONG

LONG MANUFACTURING CO., DETROIT, MICHIGAN

ALUMINUM



LYNITE

Reg. U.S. Pat. Off.

PISTONS AND RODS

Aluminum Alloy Pistons and Connecting Rods keep trucks out of the shop and lengthen their useful life. That means more profit to the operator.

ALUMINUM COMPANY OF AMERICA
PITTSBURGH, PA.

ALUMINUM • IN • EVERY • COMMERCIAL • FORM



◆ *Largest producers of*
Denatured Alcohol ◆

U.S. INDUSTRIAL ALCOHOL CO.

Executive Offices: 110 East 42nd Street, New York, N. Y.—Branches in all principal cities

"100% Interest-Nationally!"

IN THE MID-WEST MOTOR TRUCK TRANSPORTATION CONGRESS

October
23, 24, 25, 26

Manufacturers Building
INDIANAPOLIS

October
23, 24, 25, 26

Under the Auspices of

Motor Truck Association of Indiana, Inc.
The Ohio Association of Commercial Haulers, Inc.
Motor Truck Club of Kentucky, Inc.

With the Co-operation of Many Other Similar State Truck Organizations

Meetings for the discussion of vital problems concerning every phase of Motor Truck Transportation are scheduled, to be led by speakers recognized as authorities in their respective lines of business.

Every present and prospective user of Motor Trucks is interested in this program. The solving of essential Motor Truck problems means actual savings to the operator of TIME, MONEY and CUSTOMERS.

In no other manner — than by such discussions — can the manufacturer, wholesaler, merchant and operator gain invaluable knowledge of how Motor Truck Transportation can increase his business, better his service and reduce his operating costs.

THE GREATEST MOTOR TRUCK CONGRESS IN HISTORY EVER SPONSORED BY THE TRUCK OPERATORS —AND THE MOST IMPORTANT INDUSTRIAL EVENT OF THE YEAR.

Complete exhibits will be on display of the latest improved MOTOR TRUCKS, MOTOR TRUCK BODIES and MOTOR TRUCK EQUIPMENT.

The exhibit feature makes this Congress the most complete occasion of its kind in the history of the Motor Truck industry.

Never before has such an opportunity been offered for inspection of the many Motor Trucks, Bodies and kinds of Equipment particularly suited to the various needs of modern business.

MANUFACTURERS HAVING SUFFICIENT CONFIDENCE IN THEIR MOTOR TRUCKS, BODIES AND EQUIPMENT WILL EXHIBIT THEM FOR DIRECT COMPARISON WITH THOSE OF OTHERS. This point is of vital importance to the prospective purchaser.

For Further Particulars Address:

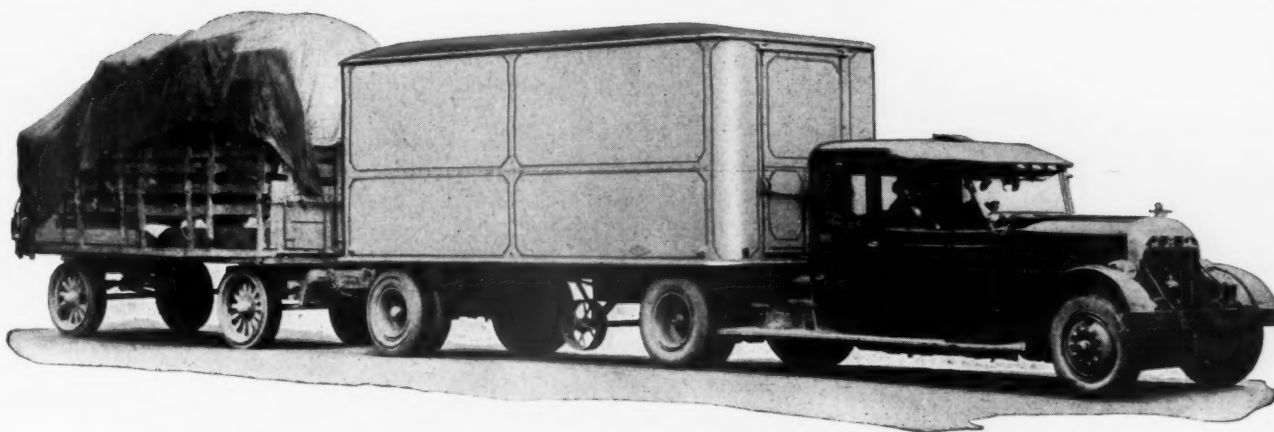
Mid-West Motor Truck Transportation Congress

Executive Offices

Auburn, Indiana

WISCONSIN AXLES

for Motor Trucks *and* Motor Coaches



On Schedule with ACME

Wisconsin Axles are available for every heavy duty transportation service.

For trucks rated 1½ tons to 7 tons.

For buses seating 15 to 60 passengers.

For six-wheelers from 6 tons to 12 tons.

Specify

WISCONSIN

FOR THESE REASONS

**DURABILITY
LOW UP-KEEP COST
POWERFUL BRAKES**

From center of production to centers of distribution, maintaining delivery schedules day after day in all kinds of weather, this Acme model 15H Tractor owned by C. H. Caldwell hauls tires from Akron to Detroit.

Every possible factor of safety and appointment for comfort has been designed into the unit to insure 24 hours a day service.

A Wisconsin heavy duty Double Reduction Axle plays an important part in making this operation a success. Acme engineers chose Wisconsin because of its proven ability to handle heavy loads and stand up under continuous high speeds.

Wisconsin Parts Company - Oshkosh, Wis.

Utmost RADIATION



Cuts Tire Costs!

The hollow spokes of the Dayton Dual Pneumatic Steel Wheel are so designed that, when in motion, a constant air circulation is set up around the tire and brake drum, assuring utmost dissipation of heat. Tests have been made which prove conclusively that Dayton Dual Wheels increase tire mileage.

The Dayton Dual Wheel has the typical super-strength of electric furnace steel combined with the built-in strength of the Dayton Arch Design. It is light in weight and affords instant accessibility and quick tire change. Install Dayton Duals and you'll find that they will save you MORE and do MORE than any wheels you've ever had.

*Write for Illustrated Literature
on the Dayton Dual Pneumatic*

THE DAYTON STEEL FOUNDRY COMPANY
Dayton, Ohio

Dayton

The Mark of a Good Wheel

Pack a skyscraper on this fellow's back!

ONE look suggests ample carrying capacity to pack the mightiest load . . . and traction to pull it through the heaviest going. And looks are not deceiving . . . for the GOODRICH DE LUXE CUSHION SAFETY is built of a new and special rubber compound that took us years to develop. The toughest, strongest and most wear-resisting that Goodrich science could compound. Look for records . . . new low-cost records . . . new mileage records . . . after you buy DE LUXE CUSHION SAFETYS through your nearest Goodrich Distributor.

THE B. F. GOODRICH RUBBER CO.
Est. 1870 Akron, Ohio Pacific Goodrich Rubber Co., Los Angeles, Cal. In Canada: Canadian-Goodrich Co., Kitchener, Ont.



Specify
Goodrich
on your next
Truck

Goodrich

FOR TRUCK TIRES

Solids and Heavy Duty Silvertowns, High Pressure or Balloon

One Republic Sells Another

and doubles the dealer's profit

*These
advantages of the
Republic Sales
Franchise:*

A Complete Line
Performance that
Sells
Policy of Fairness
A Leading Name
Steady Profits

The best salesman a Republic dealer has is the truck his customer buys. For once on the road, that new Republic sells its buyer with the strongest arguments known—economy and performance. And as years and miles roll by, the Republic proves Republic superiority. No wonder, then, that the owner returns to the Republic dealer when he's in the market for another truck!

Repeat sales mean double profits for you as a Republic dealer. Not a single "repeater" escapes you, for the complete Republic line equips you with a model to meet every truck-buyer's need. A model with as good a pedigree as the first truck you sold.


Repeat business is only one of the many reasons why the Republic Sales Franchise has meant for a hundred dealers—"Steady sales, *Repeat* sales" and "Steady profits, *Repeat* profits."

* NOTE: The Linn Manufacturing Corporation, manufacturers of the sensational Linn Tractor, is a subsidiary of the Republic Motor Truck Co., Inc.

Desirable Territory now open. Write or wire for complete information on the Republic Sales Franchise.

REPUBLIC MOTOR TRUCK CO., Inc., Alma, Mich.

REPUBLIC



TRUCKS

**Nothing *Finer*
Can Be Said of Any
Motor Vehicle Than,
It is -**



LYCOMING MOTORS

LYCOMING MANUFACTURING CO.
WILLIAMSPORT, PENNSYLVANIA

The Most Progressive Motor Builders In The Industry

Throughout an Entire Fleet —A Speed Wagon for Every Hauling Need!

HERE'S a remarkable fact—Big buyers in every vocation, men with widely varying requirements, have found that the Speed Wagon line gives them *everything they have ever looked for* in motor trucks!

Some want speed to cope with modern traffic—and discover that Speed Wagon Speed includes quicker acceleration, surer stopping, wider areas covered and greater Daily Mileage Output.

Some want power—and learn that the Reo 6-cylinder engine is unsurpassed for steady, economical pulling.

Some want stamina—long life—low maintenance cost—beauty of appearance. All these, Speed Wagons combine in a measure never known before.

You, too, can have Speed Wagon quality *throughout an entire fleet*—for today there are thirteen Speed Wagon wheelbases, capacities from $\frac{1}{2}$ to 3 tons.

Try out a Speed Wagon—start it, step on it, stop it, park it. You'll find what you have been looking for.

REO MOTOR CAR COMPANY, Lansing, Michigan

JUNIOR—Capacity $\frac{1}{2}$ ton
115-in. wheelbase,
Chassis \$895

TONNER—Capacity 1 ton
123-in. wheelbase,
Chassis \$995
138-in. wheelbase,
Chassis \$1075

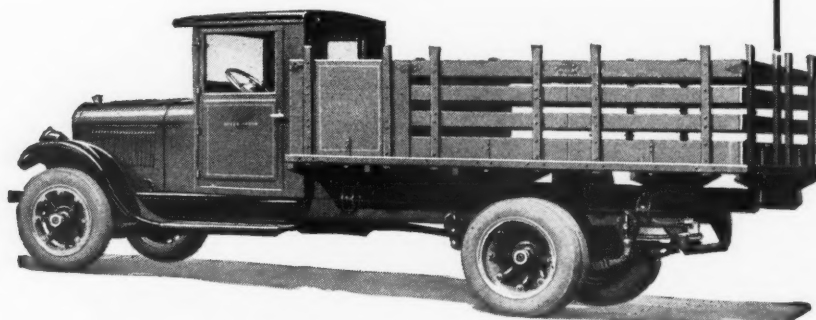
SENIOR—Capacity 3 tons
175-in. wheelbase,
Chassis \$2090

STANDARD—Capacity
 $\frac{1}{2}$ tons
133-in. wheelbase,
Chassis \$1245
148-in. wheelbase,
Chassis \$1345

GENERAL UTILITY
Capacity $\frac{1}{2}$ tons
143-in. wheelbase,
Chassis \$1345

Chassis Prices at Lansing

HEAVY DUTY
Capacity 3 tons
159-in. wheelbase,
Chassis \$1985
130-in. wheelbase,
(Dump) \$1935
MASTER—Capacity 2 tons
148-in. wheelbase,
Chassis \$1545
164-in. wheelbase,
Chassis \$1645



SPEED REO WAGON
Powered with 6-Cylinder Motors

Motor heat cannot damage a Permite Piston

PERMITE PISTONS are designed in our own laboratory—the largest of its kind in the world. Made of special formula aluminum alloy, they are cast in permanent molds, and built entirely in our own plant.

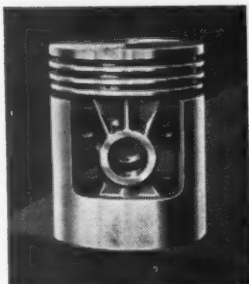
They are given exhaustive tests. Careful examinations under the microscope and X-ray, combined

The Permite Straight Slot Piston. Made with the standard straight-slot design.



with chemical and physical tests, eliminate flaws in the finished product. Every known test is applied in an effort to make them better. Permite Pistons are constantly being proved. They are never an experiment for the user.

Permite aluminum alloy wears longer than cast iron. It gets rid of heat five times as fast. It weighs only one-third



The Permite Strut Type Piston

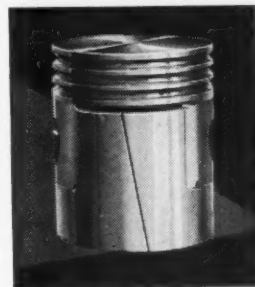
as much. It reduces motor vibration. Makes cooler-running motors.

More than three-fourths of all new cars are equipped with aluminum-alloy pistons. When replacements are made, aluminum-alloy pistons should be used. The fine balance of modern high-speed, high-compression motors requires it!

With Permites, you can supply any model of any make of car. And nine-tenths of all this work you can do with only fifty Permite numbers!

Your distributor will furnish full information and prices. Or write direct to ALUMINUM INDUSTRIES, INC., Cincinnati, Ohio.

The Permite Spiral Slot Piston. Made with a spiral slot that absorbs the piston metal's contraction and expansion evenly, over its entire surface—giving a tighter fit with no danger of scoring cylinders.



BRANCH OFFICES

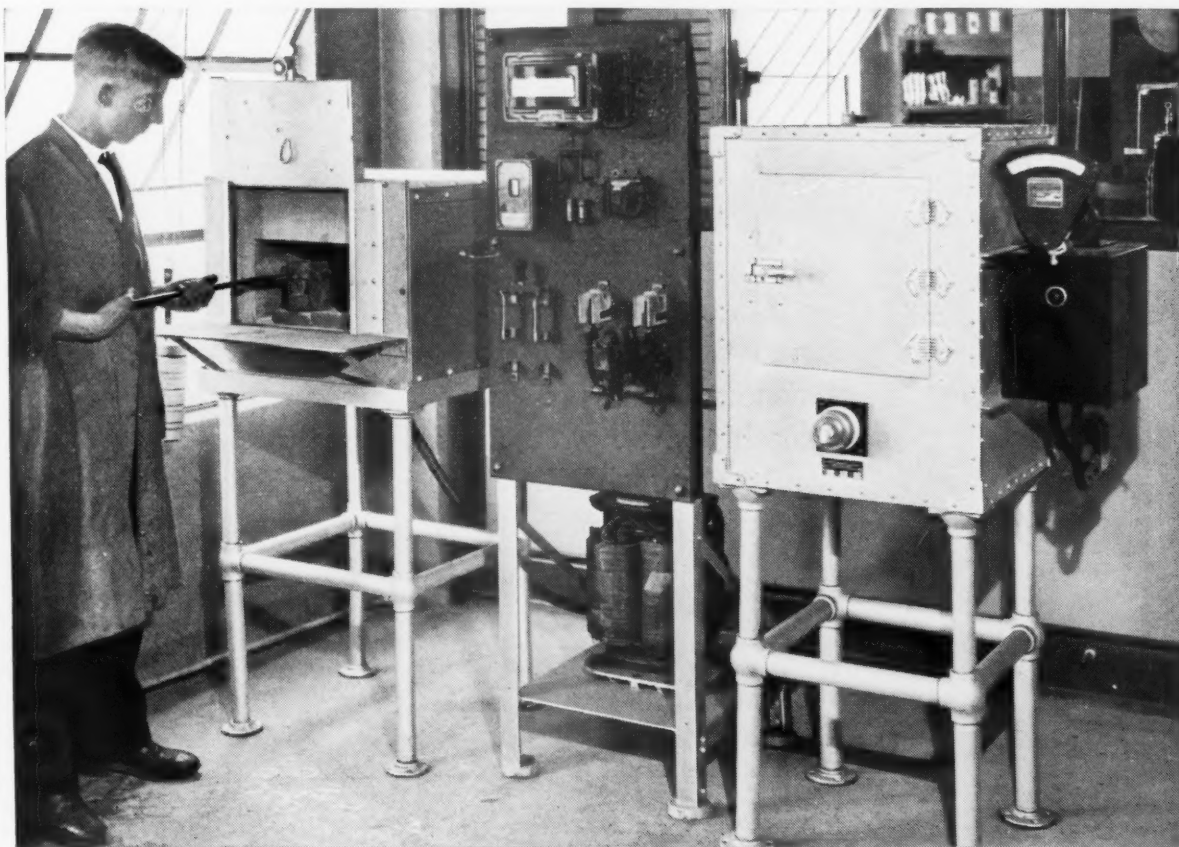
New York Warehouse
ALUMINUM INDUSTRIES, Inc.
33 West 60th Street
New York, N. Y.

San Francisco Warehouse
ALUMINUM INDUSTRIES, Inc.
382 Golden Gate Avenue
San Francisco, Calif.

Atlanta Warehouse
ALUMINUM INDUSTRIES, Inc.
212-213 Red Rock Bldg.
Atlanta, Ga.

Detroit Office
ALUMINUM INDUSTRIES, Inc.
Lexington Building
2970 W. Grand Blvd.
Detroit, Mich.

Kansas City Warehouse
ALUMINUM INDUSTRIES, Inc.
207 East 22nd St.
Kansas City, Missouri



View in our experimental heat-treatment laboratory

PERMITE PISTONS

ALUMINUM INDUSTRIES, INC., CINCINNATI, OHIO



All That You Expect of a Truck—AND MORE!

THE ability to carry capacity loads, at high speeds, over long, continuous runs is becoming more and more a requirement in the motor truck today. Grammm Trucks have always performed in this outstanding fashion. Performance is the only basis upon which commercial vehicle value can be justifiably estimated—and unless they are sold upon this basis they cannot be an asset to any vocation. Grammm Motors extend to you a sound dealer franchise . . . with liberal discount offer and profit proposition. Backed by thirty years' leadership in truck manufacturing.

Investigate now for early returns.

POWERFUL and FAST—Built to Last!

GRAMM MOTORS, Inc.

Builders of Fine Motor Trucks and Coaches

Member Motor Truck Industries, Inc., of America

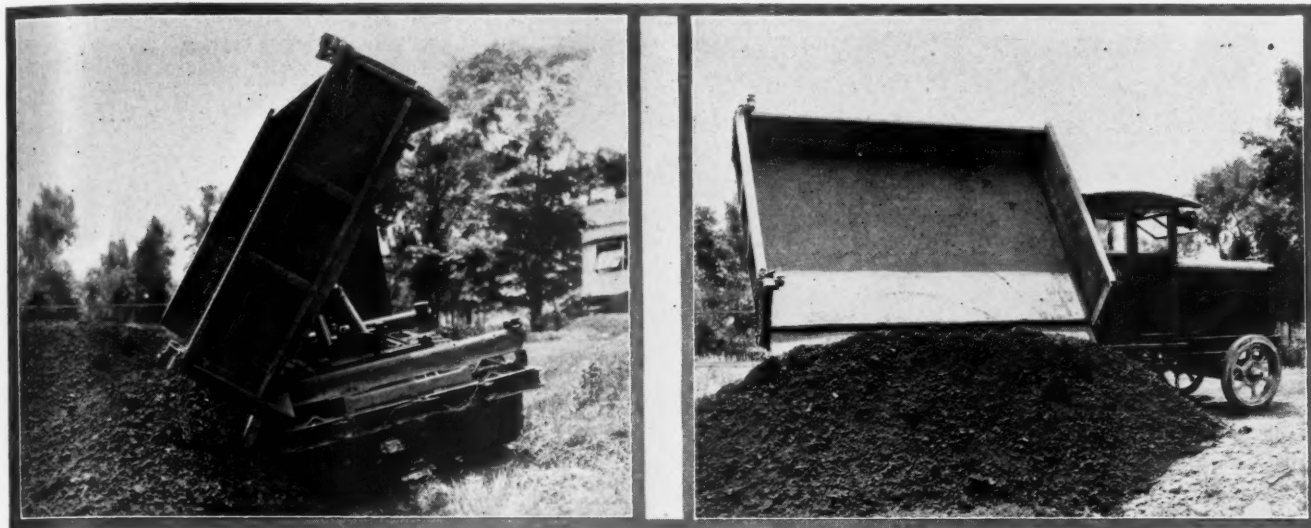
EXECUTIVE OFFICES
LIMA, OHIO

FACTORY
DELPHOS, OHIO

NECESSITY

the

Commercial 3-Way Dumping Body



Rear dumping only would not do. Too much time lost—unnecessary wear and tear on the truck—profits too small at the finish.

The Commercial Three Way has turned the tables on old, worn out methods substituting efficiency, speed and greater economy.

With a Commercial Three Way the load can be dumped to either side or rear at the will of the operator—from the cab.

Side and tail gates open and close automatically, discharging the load moving or standing—spreading if desired, quickly, and where you want it. Especially efficient for coal deliveries.

Twenty (20) Reasons

Hydraulically operated.

Dumps right, left and rear.

No maneuvering for position.



No blocking traffic.
Dumps while the other fellow is getting ready.

Deposits load clear of truck-wheels.

Body controlled at any angle.

Unnecessary to stop traffic.

Eliminates strain on motor.

Easy to operate—
Small upkeep.

Obviates turning, cramping and backing.

All steel bodies.

Down fold side gates.

Extension side-boards.

Body bed one solid sheet.

Indispensable for road building.

Ideal for coal deliveries.

Cuts excavating costs.

Direct lift on load—no lost power.

Saves time and money.

MADE TO FIT ANY TRUCK FROM 1 TO 15 TONS CAPACITY
WRITE FOR DESCRIPTIVE CATALOGS

** Will exhibit at the Good Roads Show, Cleveland, Ohio, January 14-18, 1929.*

Manufactured by

THE COMMERCIAL SHEARING & STAMPING CO.
Youngstown, Ohio

LEAF SPRINGS

*A most important element
in Truck and Bus Efficiency—
is Quality and Spring Design*

Our Sole Aim—Quality and Service

For many years our springs have proven their worth to men who know that that *quality* pays in the long run.

SPRING~PERCH CO.

CLARENCE F.
TOLLZIEN

*Direct Factory Representative
for Michigan and Ohio*

STRATFORD, CONN.

Makers of Springs Since 1843

OFFICE:

2-228 General Motors Bldg.
Detroit, Mich.
Phone: Empire 1025 Detroit



MILEAGE
RECORDS

Veedor-ROOT

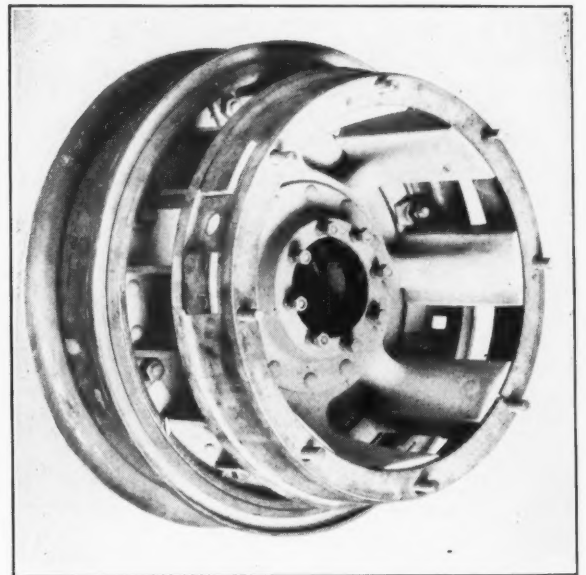
HUB ODOMETERS

Prove to your customers the mileage-value they get from your trucks and supplies. Show the fleet-owner you've got the lines which give him the longest run for his money. Pave the way for re-orders of replacement parts, tires and accessories. Regular model, adaptable to all standard trucks, \$20. For Model A Fords, complete with threaded hub for attaching, \$21. Ask for informative circulars.

Veedor-ROOT INCORPORATED
HARTFORD, CONN.



COST
CONTROL



Van Dual Pneumatic Wheels
for replacement using standard
rims and hubs.

For territory, prices and liter-
ature write—

ERIE MALLEABLE IRON CO.

Wheel Division
ERIE, PA.



FOR twenty-four years, and today, Spicer has claimed the distinction of being the foremost manufacturers of universal joints and propeller shafts in the world.

SPICER MFG. CORP.

South Plainfield

New Jersey

Spicer
Propeller Shafts

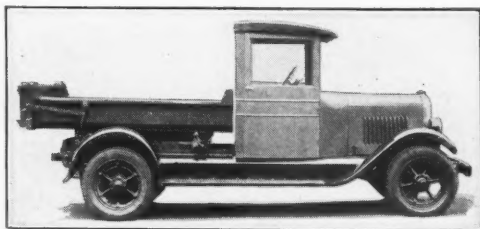
GALION ALL STEEL COAL DUMP BODIES ARE IN DEMAND



OVERHEAD COSTS ARE REDUCED AND HERE'S WHY'

1. The bodies are dumped quickly and easily.
2. Scientific construction leads to economical operation.
3. The unit haul is the most advantageous—and
4. The flexible interchangeability of these bodies to any chassis frame permits greater adaptability.

Write For Details THE GALION ALLSTEEL BODY CO. Box 5, Galion, Ohio



Hughes-Keenan 90" Body with Underbody Hoist
on G. M. C. Truck

"I wore out three good trucks with it!"

THAT'S what one user wrote when ordering another Hughes-Keenan Dump from the dealer who sold him the first. Yes, he wanted another chassis, too. Got honest-to-goodness wear out of the others—but that dump body sure stood the gaff.

A Hughes-Keenan Dump Body on a G. M. C. truck will assure your customers a dump truck unit that will give them more loads per investment—longer-on-the-job service, and bring them back tickled to death to do business with a dealer who sold such an honest-to-goodness outfit.

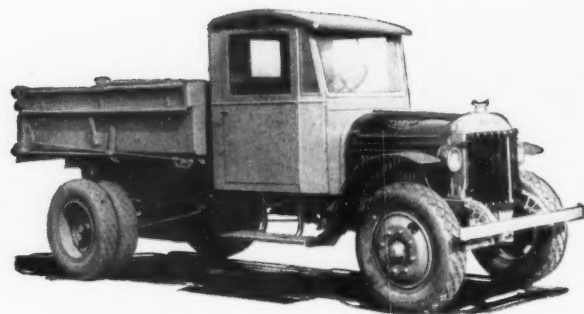
There are Hughes-Keenan bodies for Ford, Chevrolet, Graham Bros., G. M. C. International and other trucks, too.

There's a mighty lot of profit in these husky bodies. Let us prove it!

Clip this advertisement or send a postal card.

The Hughes-Keenan Co., Mansfield, Ohio

HUGHES-KEENAN
Steel Dump Bodies



SCHACHT "Roadmaker"

With its faster speed, easy handling, and positive traction, the SCHACHT Roadmaker often moves more tonnage per day than another truck of twice its rated capacity. 6-cylinder Waukesha engine; maximum payload capacity 3½ tons; 140-in. wheelbase.

The LeBlond-Schacht Truck Co.

Pioneers in Motor Transportation

Cincinnati

Ohio

SCHACHT
TRUCKS

**Do You Sell Trucks
for Service?**

Then sell trucks that have Weatherproof Cabs. Here is construction that will last. Here is comfort that makes for efficiency. The service of a truck is not supposed to be used up in a month, nor in a year. Weatherproof Cabs will serve as long as the trucks under them serve. Sell cab service with truck service. It pays.

Weatherproof Body Corporation

438 Shiawassee St., Corunna, Michigan

Standard and
Coupe Cabs for
all heavy-duty
trucks.

Send for
complete
specifications
and prices.



Weatherproof

DAY-ELDER
MOTOR TRUCKS

**A Model for Every
Trucking Purpose**

FOUR CYLINDER

1½ to 6 Tons

SIX CYLINDER

1, 2 and 3 Tons

Dealers:

We can offer you an unusual sales plan
which assures you increased profits

Write for details today.

National Motors Mfg. Co.

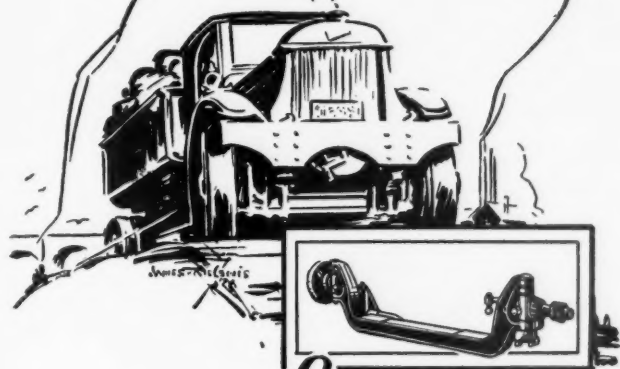
464 COIT STREET,

IRVINGTON, N. J.



SHULER

FRONT AXLES



for **TRUCKS**

Tractors and Trallers

A BUYING GUIDE

There are many good names that are guide posts in the selection of a product, names that bring to mind leadership—quality and progress.

"SHULER," like other significant names, is a buying guide in the front axle industry.

Your preference as to brake equipment can be taken care of.

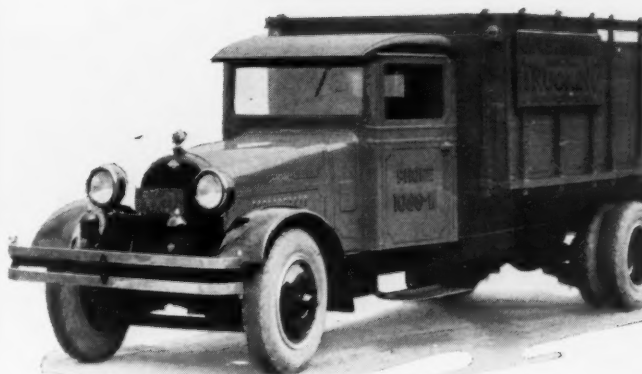
FRONT AXLES ONLY

SHULER AXLE CO.

INCORPORATED

LOUISVILLE KENTUCKY

MEMBER OF MOTOR TRUCK INDUSTRIES, INC. OF AMERICA



Recently one of our representatives walked in on a Larrabee dealer and heard him telling his brother, who is a dealer of another make of truck in a city 100 miles away:

"After all, the driver has a good deal to say about the purchase of a new truck. He knows trucks and he knows the work his truck has to do. His word carries a lot of weight with the boss. Why not sell a truck the driver can be enthusiastic about?"

That's how Larrabee dealers feel.

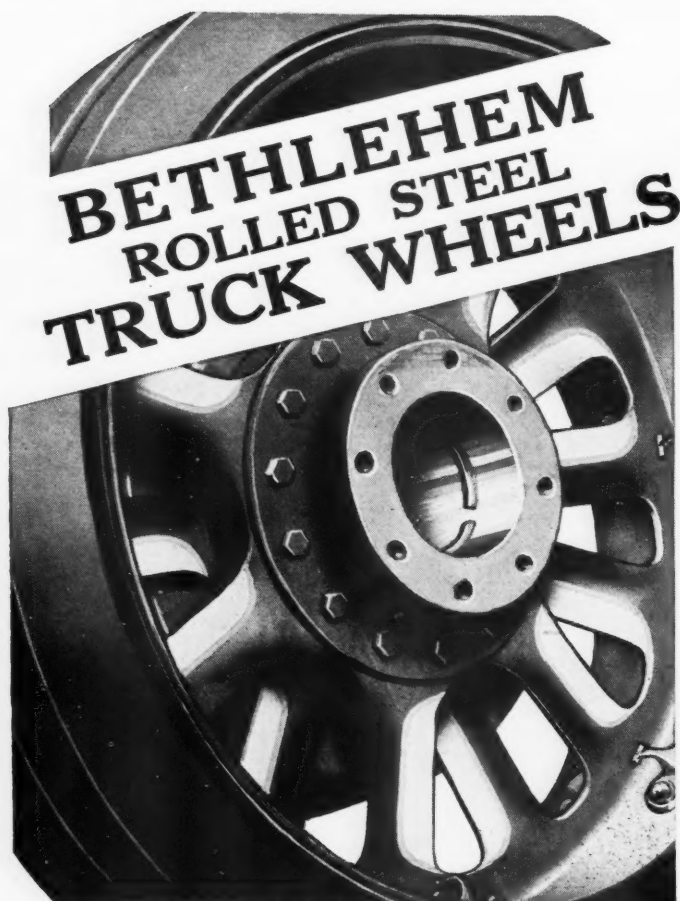
LARRABEE-DEYO MOTOR TRUCK CO.

BINGHAMTON NEW YORK



LARRABEE

SPEED SIX



BETHLEHEM ROLLED STEEL TRUCK WHEELS

BETHLEHEM STEEL COMPANY, General Offices: BETHLEHEM, PA.

ACME United

EIGHTEEN
MODELS

FIFTEEN
MODELS

33 models are available for the customer, ranging from the light, fast, dependable delivery model to the heavy type of Van with 18 foot body.

Contractor models for road building with capacities from 1 to 5 yards and all of the models may be had with either 4 or 6-cylinder motors and with 3 optional wheel bases. Tire equipment, brakes and accessories to meet the customer's exact specifications.

The Truck of Proved Units deserves your consideration and our representative in your territory will be pleased to assist you with your hauling requirements.

A few localities are not represented.

DEALERS INTERESTED INVESTIGATE

Acme Motor Truck Co.
Cadillac, Michigan

NEXT MONTH-

STERLING will have
an important announce-
ment of vital interest to
all motor truck dealers

Watch For It!

STERLING MOTOR TRUCK CO.
MILWAUKEE WISCONSIN

Sterling

SIXES

CHAIN • WORM • BEVEL DRIVE... 1½ TO 10 TON CAPACITY.



The Right Bearing For Every Car

Where Durability Counts

By giving better clutch operation, B.C.A. BALL BEARINGS have won recognition as the ideal type for the throwout and pilot positions. They have the stamina and long life that is so vital for clutch service. Their moderate cost and ultimate economy deserve your consideration.



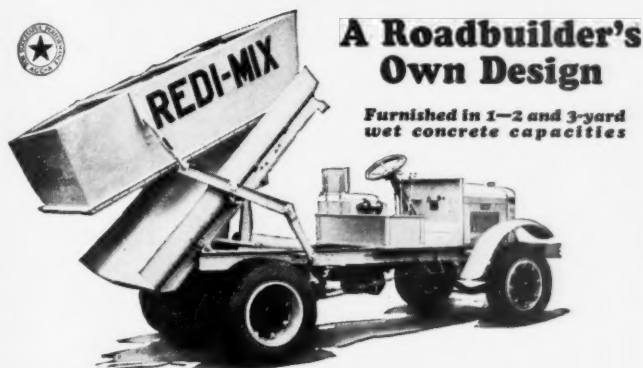
Angular Contact
Radial Bearing



Thrust Bearing

Bearings Company of America
LANCASTER, PA. DETROIT MICH. OFFICE
1012 FORD BLDG.

HUG



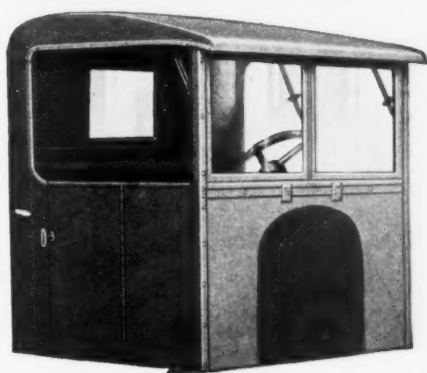
A Roadbuilder's Own Design

Furnished in 1-2 and 3-yard wet concrete capacities

THE Hug Redi-Mix Body is a specially designed Body for the transportation of wet concrete. In addition to instantly releasing the entire wet batch, the Hug Redi-Mix Body remixes the concrete thoroughly in process of dumping.

Desirable territory available for responsible distributors. Write for details of price and design.

THE HUG CO., Highland, Ill.



HIGHLAND for CABS

Driver comfort, low cost of maintenance, and good appearance—these are the advantages you get when you specify Highland Cabs for all your trucks.

Made in three styles—Coupe, Full Vestibule and Semi-enclosed Curtain Cabs—to fit all trucks and every type of service. Rocker Sill Mounting, a special Highland Feature, relieves cab of all strain due to twist of chassis. Furnished at no extra cost.

Send for complete bulletins and list of distributors.

The HIGHLAND Body Mfg. Co.
403 Elmwood Place, Cincinnati, Ohio



"Six months perfect service and I'm sure it'll serve me well for many years," says Carl P. Gundrum, general hauling contractor.

WITHOUT A RIVAL

The Hercules-Ditwiler power dump body hoist is the only power hoist that fully meets ALL requirements.

The lifting point is at the front of the dump body. There is NO EXCESSIVE STRAIN ON THE CHASSIS FRAME.

The control is by irreversible worm gearing ABSOLUTELY SELF-LOCKING at any point.

Adaptable to all makes of light and medium weight trucks having power-take-off opening.

Write for further facts and details.

The Ditwiler Mfg. Co., Galion, Ohio

HERCULES-DITWILER POWER DUMP BODIES



A Step Ahead—For Your Customers—For You!

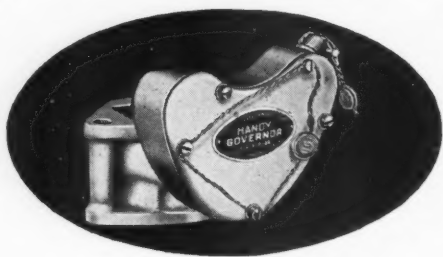
Your customers—people in the market for trucks—will appreciate the speed and quick get-away of the Gram-Bernstein trucks—the long, low-cost, trouble-free service that they provide and the adaptability of the Gram-Bernstein Trucks to any job it is put to.

You—as a dealer—will cash in on the many satisfied customers that this line will produce for you—and will see the many advantages that our dealer proposition grants you. Write for our plan of Liberal Factory Cooperation.



GRAMM-BERNSTEIN CORP.

EAST WAYNE & SCOTT STS.
LIMA, OHIO



Leadership

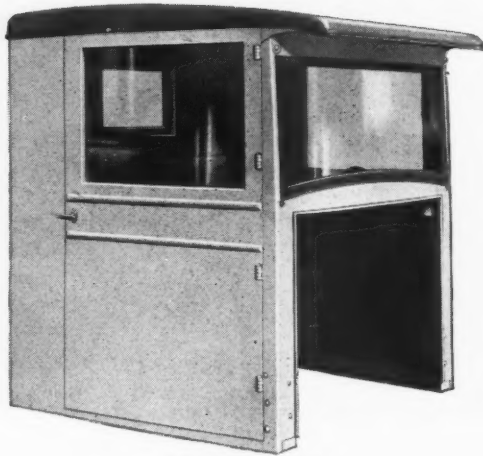
More than 75% of all truck manufacturers equip with Handy Governor or list Handy as recommended equipment. An overwhelming majority of all national fleets are Handy-equipped. Over 300,000 Handy Governors are today in successful service.

Handy is the undisputed leader of the automotive Governor field. Standardize with Handy, and ensure a square deal for every truck that goes out of your door.

HANDY GOVERNOR CORP.

3929 W. Fort St. Detroit, Mich.

RAIN or SHINE



DELUXE COUPE

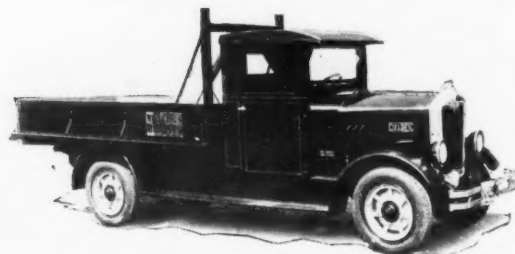
Tailored to fit any standard chassis without alteration. Especially adapted for the long haul where VISION, COMFORT and DURABILITY are necessary.

**MAXIMUM
COLD WEATHER PROTECTION**

THE GENERAL WOODWORK CORP.

1227 Budd Street

Cincinnati, Ohio



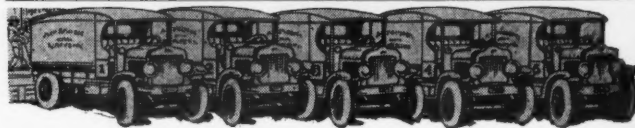
YOU ARE INVITED

To carefully inspect *Selden Construction* and *Selden Performance*. Their strong appeal to truck owners and drivers is so apparent you will quickly appreciate the opportunity for building up substantial profits selling Selden Trucks.

*1, 2, 3, 4, 5-7 Ton Sizes, All
With 6-Cylinder Engines*

SELDEN TRUCK CORPORATION
ROCHESTER, N. Y.

Selden Motor Trucks



A MAN once kept an elaborate cost record of his trucks. He found out just what his trucks cost him per mile and per package, "down to the sixth decimal." It was great stuff alright, but when he got the final result—he didn't know what to do with it!

Later, this same man put *Servis*

Recorders on his trucks. Instead of a mass of figures, he got a "picture" of what his trucks actually did the day before. And when the very first day he saw a delay of 1½ hours in the afternoon, he knew what to do with that information all right!

A chart is worth a million figures.

Write for Booklet "A"

The Service Recorder Company

CLEVELAND • OHIO • U. S. A.



The buyer who governs himself solely by price learns in time, by his own personal experience, that quality offers the only safe medium to truly save money.

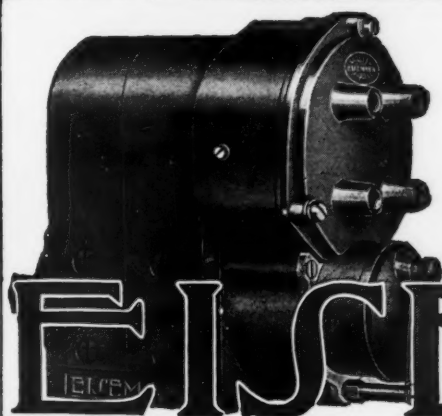
THE MATHER SPRING COMPANY, TOLEDO, OHIO
Manufacturers of Scientifically Heat Treated Automobile Springs

BLOOD-BROTHERS MACHINE COMPANY



The universals on a Blood shaft need hardly half the attention other joints do, and years will necessitate the replacement of but a few simple parts.
Member of Motor Truck Industries, Inc., of America

ALLEGAN, MICH.



The Leading Magneto

for Motor Trucks and Buses



Widely used, and recognized as the standard of the industry. Backed with unrivalled performance record.
EISEMANN MAGNETO CORPORATION
165 Broadway New York

EISEMANN

25th ANNIVERSARY 25th ANNIVERSARY



If you want to know about a line of SIXES that's selling faster than we can build them—write for specifications of the 25th Anniversary Atterburys.

ATTERBURY MOTOR CAR CO.
Motor Truck Manufacturers for a Quarter of a Century
Elmwood Ave. at Hertel, BUFFALO, N. Y.

SIXES 6 6 SIXES SIXES

Advertisers' Index

A

Acme Motor Truck Co. 96
Aluminum Company of Amer-
ica 80
Aluminum Industries, Inc. ... 89
Atterbury Motor Car Co. 99
Autocar Co. 5

B

Bearings Co. of America 96
Bethlehem Steel Co. 96
Blood-Brothers Machine Co. ... 99
Bosch Magneto Corp., American 75
Bosch Magneto Co., Inc., Rob-
ert 51
Buda Co. 58
Budd Wheel Co. 55

C

Chevrolet Motor Co. 101
Chilton Class Journal Co. 66, 67
Clark Equipment Co. 73, 74
Coleman Motors Corp. 6
Commercial Shearing & Stamp-
ing Co. 91
Continental Motors Corpora-
tion Back Cover

D

Dayton Steel Foundry Co. 84
Diamond T Motor Car Co. 53, 54
Ditwiler Manufacturing Co. ... 97
Dixon Crucible Co., Joseph... 62

E

Eaton Axle & Spring Co. 63, 64
Eisemann Magneto Corpora-
tion 99
Erie Malleable Iron Co. (Van
Metal Wheel Division) 92

F

Federal Motor Truck Co.,
33, 34, 35, 36
Fisk Tire Co., Inc. 78
Fuller & Sons Mfg. Co. 72

G

Galion Allsteel Body Co. 93
General Woodwork Corp. 98
Goodrich, B. F., Rubber Co. ... 85
Goodyear Tire & Rubber Co. ... 76
Graham Brothers Front Cover
Gramm-Bernstein Corp. 97
Gramm Motors, Inc. 90

H

Handy Governor Corp. 98
Heil Co. 57
Hercules Motor Corporation... 70
Highland Body Mfg. Co. 97
Hoopes, Bro. & Darlington,
Inc. 4
Houde Engineering Corp. 69
Hug Co. 97
Hughes-Keenan Co. 94
Hyatt Roller Bearing Co. 1
Hydraulic Hoist Manufactur-
ing Co. 71

I

Industrial Alcohol Institute,
Inc. 2
International Harvester Co. of
America, Incorporated 8

K

Kay Steel Wheel Co. 59

L

Larrabee-Deyo Motor Truck Co. 95
LeBlond-Schacht Truck Co. ... 94
Long Manufacturing Co. 79
Lycoming Manufacturing Co. ... 87

M

Mather Spring Co. 99
Mid-West Motor Truck Trans-
portation Congress 82
Motor Wheel Corp. Third Cover

N

National Motors Mfg. Co. 94
New Departure Manufacturing
Co. 7

P

Pierce Governor Co. 52

R

Reo Motor Car Co. 88
Republic Motor Truck Co., Inc. 86
Ross Gear & Tool Co. 29

S

Selden Truck Corporation... 98
Service Recorder Co. 98
Shuler Axle Co., Inc. 95
Spicer Mfg. Corp. 93
Spring Perch Co. 92
Standard Motor Truck Co. ... 65
Sterling Motor Truck Co. 96
Stewart Motor Corp. 31

T

Thermoid Rubber Co. 56
Timken-Detroit Axle Co. 68
Timken Roller Bearing Co. ... 102

U

U. S. Industrial Alcohol Co. ... 81
Unit Corporation of America 72

V

Veeder-Root, Inc. 92

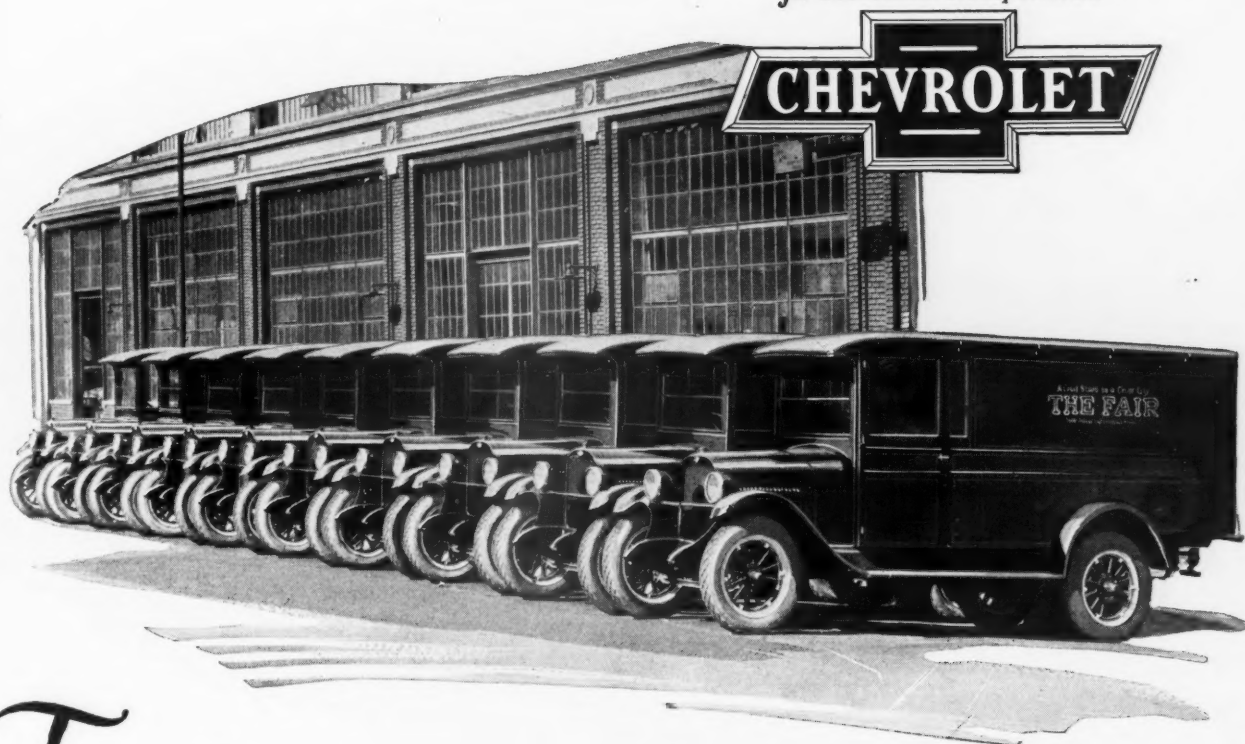
W

Weatherproof Body Corpora-
tion 94
White Co. 60, 61
Wisconsin Parts Co. 83
Wood Hydraulic Hoist & Body
Co. 77
World Bestos Corp. Second Cover

Z

Zenith-Detroit Corporation... 3

for Economical Transportation



The Lowest-Priced Truck

equipped with

4 Speeds Forward-4 Wheel Brakes

In the new Chevrolet Utility Truck, Chevrolet dealers are offering the most sensational commercial car value of the year—

—for it not only embodies the most recent advancements in truck engineering and construction, but it sells for the lowest price ever placed on a truck equipped with four-speed transmission and four-wheel brakes!

In addition to the scores of truck features for which Chevrolet has long been famous, there is now provided in

the new 4-speed transmission, an extra-low gear that gives tremendous pulling power for steep hills and heavy roads . . . powerful 4-wheel brakes that safely control the heaviest loads under every condition of highway . . . and a new ball bearing steering mechanism which makes it easy to drive over rough and muddy roads.

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\$ 520

(Chassis Only)

f. o. b. Flint, Michigan

This sensational truck affords even greater opportunity for increased business for Chevrolet dealers—the world's largest dealers in trucks.

The Light Delivery Chassis, \$375, f. o. b. Flint, Michigan

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Division of General Motors Corporation

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